
SR 260 | US 60 CORRIDOR PROFILE STUDY

HEBER-OVERGAARD TO NEW MEXICO STATE LINE

ADOT WORK TASK NO. MPD-0040-17
ADOT CONTRACT NO. 18-177972

DRAFT REPORT: PERFORMANCE AND NEEDS EVALUATION

AUGUST 2017

PREPARED FOR:

ARIZONA DEPARTMENT OF TRANSPORTATION



PREPARED BY:



This report was funded in part through grants from the Federal Highway Administration, U.S. Department of Transportation. The contents of this report reflect the views of the authors, who are responsible for the facts and the accuracy of the data, and for the use or adaptation of previously published material, presented herein. The contents do not necessarily reflect the official views or policies of the Arizona Department of Transportation or the Federal Highway Administration, U.S. Department of Transportation. This report does not constitute a standard, specification, or regulation. Trade or manufacturers' names that may appear herein are cited only because they are considered essential to the objectives of the report. The U.S. government and the State of Arizona do not endorse products or manufacturers.

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ACRONYMS & ABBREVIATIONS

AADT	Average Annual Daily Traffic
ABISS	Arizona Bridge Information and Storage System
ADOT	Arizona Department of Transportation
AGFD	Arizona Game and Fish Department
ASLD	Arizona State Land Department
AZTDM	Arizona Statewide Travel Demand Model
BLM	Bureau of Land Management
BQAZ	Building a Quality Arizona
CCTV	Closed Circuit Television
CR	Cracking Rating
DCR	Design Concept Report
DMS	Dynamic Message Sign
EB	Eastbound
FHWA	Federal Highway Administration
FY	Fiscal Year
HCRS	Highway Condition Reporting System
HERE	Real time traffic conditions database produced by American Digital Cartography Inc.
HPMS	Highway Performance Monitoring System
I-	Interstate
IRI	International Roughness Index
ITS	Intelligent Transportation System
LCCA	Life-Cycle Cost Analysis
LOS	Level of Service
LRTP	Long-Range Transportation Plan
MAP-21	Moving Ahead for Progress in the 21 st Century
MP	Milepost
MPD	Multimodal Planning Division
NACOG	Northern Arizona Council of Governments

NPV	Net Present Value
OP	Overpass
P2P	Planning-to-Programming
PA	Project Assessment
PARA	Planning Assistance for Rural Areas
PDI	Pavement Distress Index
PES	Performance Effectiveness Score
PSR	Pavement Serviceability Rating
PTI	Planning Time Index
RTP	Regional Transportation Plan
RWIS	Road Weather Information System
SATS	Small Area Transportation Study
SERI	Species of Economic and Recreational Importance
SHSP	Strategic Highway Safety Plan
SOV	Single Occupancy Vehicle
SR	State Route
TAC	Technical Advisory Committee
TI	Traffic Interchange
TIP	Transportation Improvement Plan
TPTI	Truck Planning Time Index
TTI	Travel Time Index
TTTI	Truck Travel Time Index
UP	Underpass
USDOT	United States Department of Transportation
V/C	Volume-to-Capacity Ratio
VMT	Vehicle-Miles Travelled
WB	Westbound
WIM	Weigh-in-Motion

1.0 INTRODUCTION

The Arizona Department of Transportation (ADOT) is the lead agency for this Corridor Profile Study (CPS) of State Route 260 (SR 260) | US 60 (US 60) between Heber-Overgaard and the New Mexico State Line. The study examines key performance measures relative to the SR 260 | US 60 corridor, and the results of this performance evaluation are used to identify potential strategic improvements. The intent of the corridor profile program, and of ADOT's Planning-to-Programming (P2P) process, is to conduct performance-based planning to identify areas of need and make the most efficient use of available funding to provide an efficient transportation network.

ADOT has completed eleven CPS as part of three separate groupings or rounds.

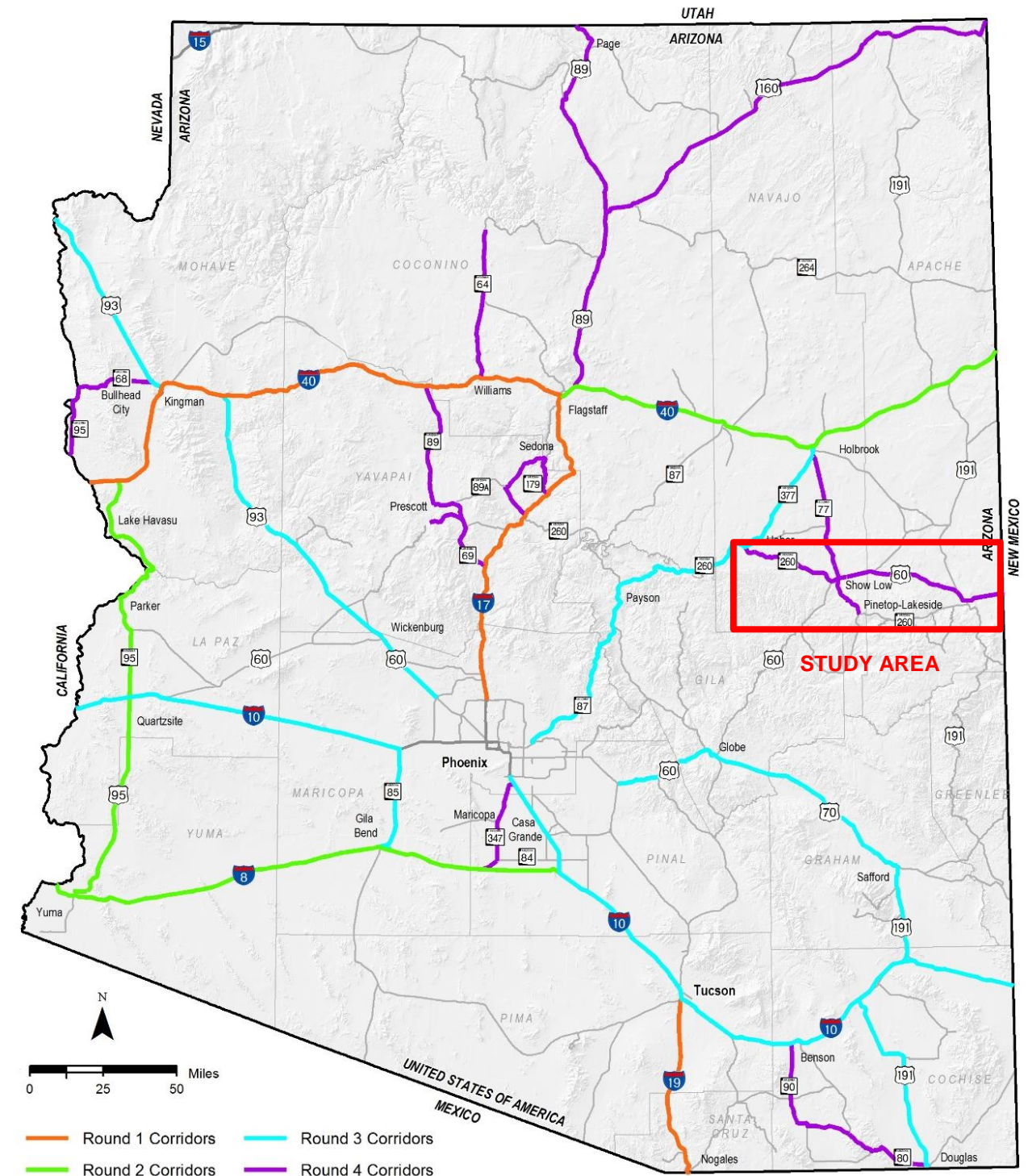
The fourth round (Round 4) of studies began in Spring 2017, and includes:

- US 89: I-40 to Utah Stateline
- US 160: US 89 to New Mexico Stateline
- SR 64: I-40 to Grand Canyon National Park
- SR 68: SR 95 to US 93 and SR 95: California Stateline to Nevada Stateline
- SR 69: I-17 to SR 89; Fain Rd: SR 69 to SR 89A; SR 89A: Fain Rd to SR 89;
- SR 89: SR 89A to I-40
- SR 77: US 60 to SR 377
- SR 90: I-10 to SR 80 and SR 80: SR 90 to US 191
- SR 179: I-17 to SR 89A; SR 89A: SR 179 to SR 260; and SR 260: SR 89A to I-17
- SR 260: SR 277 to SR 73 and US 60: SR 260 to New Mexico Stateline
- SR 347: I-10 to SR 84 and SR 84: SR 347 to I-8

The studies under this program assess the overall health, or performance, of the state's strategic highways. The CPS will identify candidate solutions for consideration in the Multimodal Planning Division's (MPD) P2P project prioritization process, providing information to guide corridor-specific project selection and programming decisions.

The SR 260 | US 60 corridor, depicted in **Figure 1**, is one of the strategic statewide corridors identified and the subject of this Round 4 CPS.

Figure 1: Corridor Study Area



1.1 Corridor Study Purpose

The purpose of the CPS is to measure corridor performance to inform the development of strategic solutions that are cost-effective and account for potential risks. This purpose can be accomplished by following the process described below:

- Inventory past improvement recommendations
- Define corridor goals and objectives
- Assess existing performance based on quantifiable performance measures
- Propose various solutions to improve corridor performance
- Identify specific solutions that can provide quantifiable benefits relative to the performance measures
- Prioritize solutions for future implementation, accounting for performance effectiveness and risk analysis findings

1.2 Study Goals and Objectives

The objective of this study is to identify a recommended set of prioritized potential solutions for consideration in future construction programs, derived from a transparent, defensible, logical, and replicable process. The SR 260 | US 60 CPS defines solutions and improvements for the corridor that are evaluated and ranked to determine which investments offer the greatest benefit to the corridor in terms of enhancing performance. Corridor benefits can be categorized by the following three investment types:

- Preservation: Activities that protect transportation infrastructure by sustaining asset condition or extending asset service life
- Modernization: Highway improvements that upgrade efficiency, functionality, and safety without adding capacity
- Expansion: Improvements that add transportation capacity through the addition of new facilities and/or services

This study identifies potential actions to improve the performance of the SR 260 | US 60 corridor. Proposed actions are compared based on their likelihood of achieving desired performance levels, life-cycle costs, cost-effectiveness, and risk analysis to produce a prioritized list of solutions that help achieve corridor goals.

The following goals are identified as the desired outcome of this study:

- Link project decision-making and investments on key corridors to strategic goals
- Develop solutions that address identified corridor needs based on measured performance
- Prioritize improvements that cost-effectively preserve, modernize, and expand transportation infrastructure

1.3 Corridor Overview and Location

The combination of SR 260 from Heber-Overgaard to Show Low and US 60 from Show Low to the New Mexico State Line provides movement for freight, tourism, and recreation needs, serving intrastate and interstate commerce in the eastern region of the Arizona and into the State of New Mexico. It is classified as part of the National Highway System. The corridor connects the communities of Heber-Overgaard, Show Low, Pinetop-Lakeside, and Springerville. SR 260 east of Show Low is also a key link within the White Mountain area, providing access for the White Mountain Apache Tribe. The routes also provide access to the National Forests and popular destinations for visitors and residents looking for snow in the winter and seeking relief from high temperatures in the summer. SR 260 | US 60 is a significant connection for visitor traffic in the region and provides an alternative link to the State of New Mexico via the US 180 connection to US 60 in Springerville.

The history of the corridor dates to the 1930's and originally assigned other route numbers. The Payson – Show Low Highway was taken into the State Highway System in 1955 as SR 160. The Heber-Overgaard to Show Low section was re-designated as SR 260 in the 1960s and reconstructed to its current location in the 1970s. The Show Low – Hon Dah section of SR 260 was initially established as SR 173 and later reconstructed and widened as SR 260 in the 1970s and 1980s, respectively. Historical US 60 was reconstructed on a relocated alignment between Show Low and Springerville in the 1930s. Pavement has been upgraded but there have been no changes to alignment. The section of US 60 between Springerville and the New Mexico border was also reconstructed on a new alignment in the 1960s.

The higher forested elevations in Show Low area give way to flatter, open land along US 60 between Show Low and Springerville, while the Show Low – Hon Dah (Jct SR 73) remains in forested area of the White Mountains. Most of the SR 260 | US 60 corridor consists of a two-lane roadway cross-section, except the portions in the communities of Heber-Overgaard, Show Low and Springerville. The SR 260 Show Low – Hon Dah segment is entirely a four-lane roadway with continuous left turn or open median. Beyond Hon Dah, SR 260 narrows to two lanes and extends eastward connecting with US 180 in Eager.

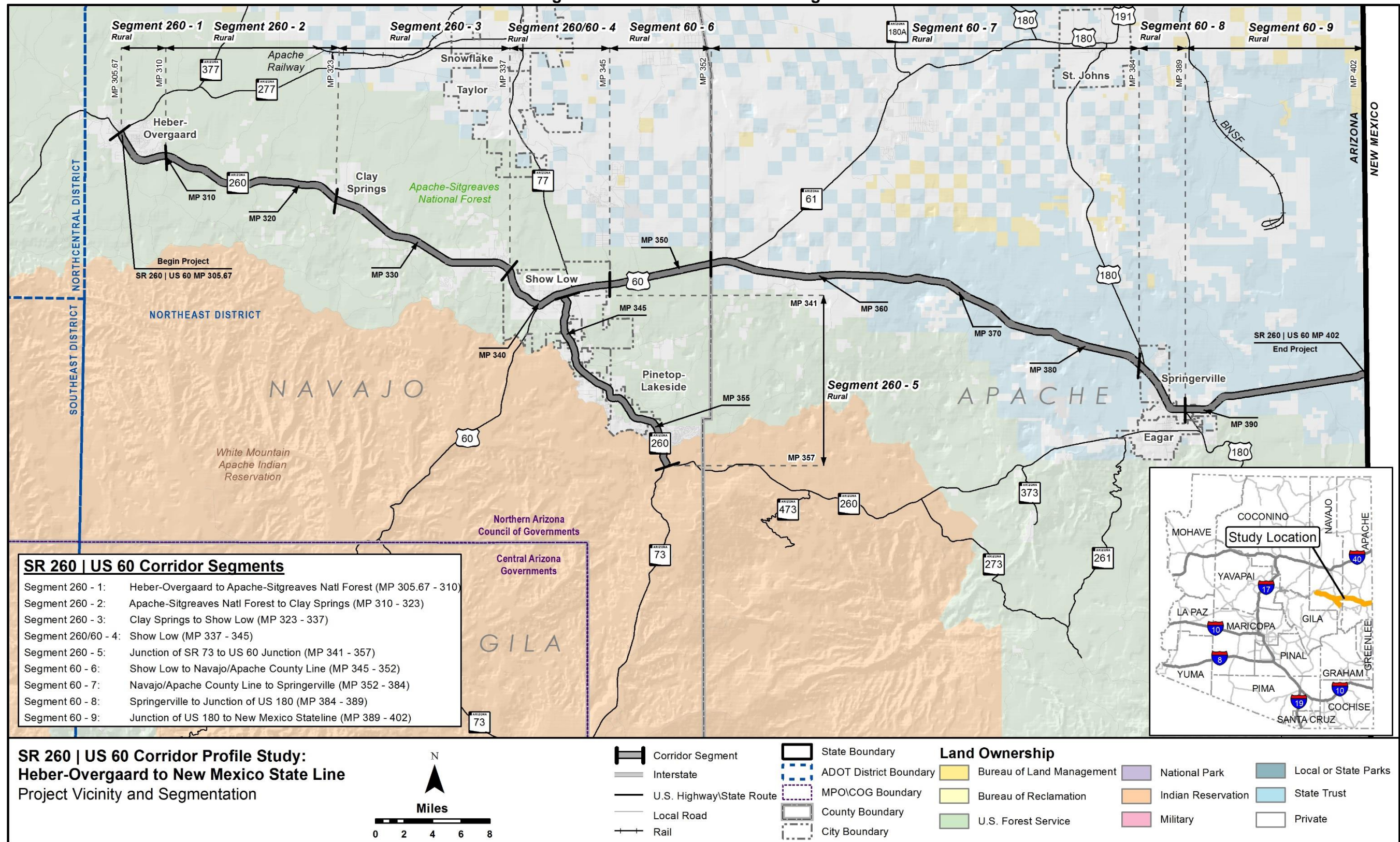
1.4 Corridor Segments

The SR 260 | US 60 corridor is divided into nine planning segments to allow for an appropriate level of detailed needs analysis, performance evaluation, and comparison between different segments of the corridor. The corridor is segmented at logical breaks where the context changes due to differences in characteristics such as terrain, daily traffic volumes, or roadway typical sections. Corridor segments are described in **Table 1** and shown in **Figure 2**.

Table 1: SR 260 | US 60 Corridor Segments

Segment #	Route	Begin	End	Approx. Begin Milepost	Approx. End Milepost	Approx. Length (miles)	Typical Through Lanes (EB, WB)	2015/2035 Average Annual Daily Traffic Volume (vpd)	Character Description
260-1	SR 260	Heber-Overgaard	Apache-Sitgreaves National Forest	306	310	4	2,2	7,000 / 10,000	Segment 260-1 is comprised of a five-lane undivided roadway section with uninterrupted flow. It is located in the community of Heber-Overgaard.
260-2	SR 260	Apache-Sitgreaves National Forest	Clay Springs	310	323	13	1,1	3,000 / 5,000	This two-lane undivided segment has uninterrupted flow characteristics and travels through the Apache-Sitgreaves National Forest.
260-3	SR 260	Clay Springs	Show Low	323	337	14	1,1	4,000 / 6,000	A rural two-lane undivided roadway, Segment 260-3 has consistent traffic volumes and slightly rolling topography with uninterrupted flow.
260 60-4	SR 260 US 60	Show Low	Show Low	337	345	8	2,2	21,000 / 30,000	This five-lane undivided segment with interrupted flow travels through the town of Show Low until its intersection with US 60. There are three stoplights on the segment in town.
260-5	SR 260	Junction of US 60	Junction of SR 73	341	357	16	2,2	28,000 / 41,000	Segment 260-5 has interrupted flow, passing through the Pinetop-Lakeside and Show Low urban areas and exhibits several curving sections in passing through the towns. It also has much higher traffic volumes compared to other segments in the corridor.
60-6	US 60	Show Low	Navajo/Apache County Line	345	352	7	1,1	5,000 / 8,000	The segment is a rural two-lane undivided roadway with uninterrupted flow. The terrain is rolling.
60-7	US 60	Navajo/Apache County Line	Springerville	352	384	32	1,1	4,000 / 4,000	This rural segment with uninterrupted flow is mostly flat, except for a moderate grade between MP 366 and MP 369.
60-8	US 60	Springerville	Junction of US 180	384	389	5	2,2	6,000 / 10,000	Segment 60-8 has interrupted flow due to a traffic signal in Springerville. Numerous local streets intersect the segment in town.
60-9	US 60	Junction of US 180	New Mexico State Line	389	402	13	1,1	1,000 / 1,000	This segment is comprised of a two-lane undivided section that travels through rolling terrain to the New Mexico state border.

Figure 2: Corridor Location and Segments



1.5 Corridor Characteristics

The SR 260 | US 60 corridor is an important travel corridor in the eastern part of the state. The corridor functions as a route for recreational, tourist, and regional daily traffic and provides critical connections among the communities it serves and the rest of the regional and interstate network.

National Context

The SR 260 | US 60 corridor is a strategic transportation link across eastern Arizona for freight and intercity travel. The SR 260 | US 60 corridor also functions as an alternate route to I-40/I-17 when either of those facilities is closed due to adverse weather or incidents.

Regional Connectivity

The SR 260 | US 60 corridor between Heber-Overgaard and the New Mexico State Line provides movement for freight, tourism, and recreation needs within Arizona and across the Arizona-New Mexico State Line. The corridor is in the Northeastern ADOT District; the Northern Arizona Council of Governments (NACOG) planning area; and two counties (Navajo and Apache). Within the corridor study limits, SR 260 | US 60 offers connections to several major roadways, including US 191, US 180, SR 73, SR 61, SR 277, and SR 77. This corridor serves Arizona cities and towns including Heber-Overgaard, Show Low, Springerville, Pinetop-Lakeside, and the White Mountain Apache tribe.

Commercial Truck Traffic

Communities along the SR 260 | US 60 corridor depend on the corridor for freight deliveries and for travel to other locations. Freight traffic (trucks) represents between 4.5% and 17.7% of the total traffic on the corridor, with the highest truck percentages near the New Mexico State Line on US 60 and Heber-Overgaard on SR 260.

Commuter Traffic

Much of the commuter traffic along the SR 260 | US 60 corridor occurs within the urbanized areas of Show Low, Pinetop-Lakeside, Heber-Overgaard, and Springerville. These areas are economic centers along what is considered mostly a combination of rural state routes, U.S. routes, and local roadways. According to the most recent traffic volume data maintained by ADOT, traffic volumes range from approximately 640 vehicles per day on US 60 near the New Mexico State Line to approximately 28,000 vehicles per day within the urban area of Show Low.

According to the 2015 American Community Survey data from the US Census Bureau, 87% of the workforce in areas along the corridor relies on a private vehicle to get to work.

Recreation and Tourism

SR 260 | US 60 provides access to many Arizona attractions such as state parks, national forests, and other recreational activities.

SR 260 | US 60 provides access to the Apache-Sitgreaves National Forest, Mount Baldy Wilderness, and Escudilla Wilderness. Other recreational destinations accessible from the SR 260 | US 60 corridor include Cottonwood Wash Trailhead (near MP 321), Deer Springs Interpretive Site (minor-via SR 188), Lewis Canyon Group Campground (via Pinedale Road-currently closed), and Ghost of the Coyote Trailhead (via Burton Road), to name a few.

Multimodal Uses

Freight Rail

The BNSF Railway has a small branch that terminates just west of Chambers and travels southward passing through St. Johns and ending before Springerville.

Passenger Rail

There are no passenger train stations along the SR 260 | US 60 corridor. The nearest passenger stations are in Winslow, Arizona and Gallup, New Mexico on Amtrak's Southwest Chief Chicago to Los Angeles route.

Bicycles/Pedestrians

Opportunities for bicycle and pedestrian travel are limited on SR 260 | US 60. Bicycle traffic on the US 60 portion of the corridor is permitted on the mainline outside shoulder. However, the effective shoulder widths are less than the preferred 4-foot minimum width with rumble strips present in some areas. As it is on US 60, bicycle traffic on the SR 260 portion of the corridor is permitted on the mainline outside shoulder, but it also has shoulder widths that are less than the preferred 4-foot minimum in some areas.

Bus/Transit

The White Mountain Connection and Four Seasons Connection offer bus service from Holbrook to smaller communities south such as Snowflake, Taylor, Show Low, and Pinetop-Lakeside, along with stops at the Navajo County Government offices and Northland Pioneer College campuses. Shuttle service between Show Low and Phoenix via Payson, with stops in Clay Springs and Heber-Overgaard, is provided by Mountain Valley Shuttle.

Aviation

There is one general aviation facility and one commercial service facility near the SR 260 | US 60 corridor. They are the Show Low Regional Airport for commercial use, owned and operated by the City of Show Low, and the Springerville Municipal Airport, owned and operated by the Town of Springerville. The western, central, and eastern portions of the corridor serve as connections to numerous other airports located in the region (via SR 260, US 60, and US 180).

Land Ownership, Land Uses and Jurisdictions

As shown previously in **Figure 2**, the SR 260 | US 60 corridor traverses multiple jurisdictions and land owned or managed by various entities in Navajo and Apache Counties and NACOG. The western section of the corridor traverses the Apache-Sitgreaves National Forest. The eastern

section of the corridor crosses a mix of State Trust land and private land. Land ownership in and surrounding the Heber-Overgaard, Show Low, Pinetop-Lakeside, and Springerville urban areas is mainly private. The southern portion of Pinetop-Lakesides’ urban area is adjacent to tribal land (White Mountain Apache Reservation).

Population Centers

Population centers of various sizes exist along the SR 260 | US 60 corridor. **Table 2** provides a summary of the populations for communities along the corridor. Moderate population growth is projected between 2010 and 2040 in the major population centers along the corridor according to the Arizona State Demographer’s Office.

Table 2: Current and Future Population

Community	2010 Population	2015 Population	2040 Population	% Change 2010-2040	Total Growth
Navajo County	107,677	109,671	120,094	11.53%	12,417
Holbrook	5,053	5,094	5,606	10.94%	553
Snowflake	5,590	5,742	7,347	31.43%	1,757
Taylor	4,112	4,208	5,554	35.07%	1,442
Show Low	10,660	11,061	15,154	42.16%	4,494
Heber-Overgaard CDP	2,822	2,930	3,395	20.30%	573
Pinetop-Lakeside	4282	4370	5272	23.12%	990
Apache County	71518	72215	66427	-7.12%	-5,091
Springerville	1961	1978	2322	18.41%	361

Source: U.S. Census, Arizona Department of Administration – Employment and Population Statistics

Major Traffic Generators

The City of Show Low, Town of Springerville, Pinetop-Lakeside, Town of Heber-Overgaard, Town of Snowflake, Town of Taylor, and City of Holbrook are major traffic generators for the SR 260 | US 60 corridor. Motorists from New Mexico using US 60 are also part of the traffic mix.

Tribes

The southern portion of the corridor is adjacent to the White Mountain Apache Reservation between Heber-Overgaard and MP 374.

Wildlife Linkages

The Arizona State Wildlife Action Plan (SWAP) provides a 10-year vision for the entire state, identifying wildlife and habitats in need of conservation, insight regarding the stressors to those resources, and actions that can be taken to alleviate those stressors. Using the Habimap Tool that creates an interactive database of information included in the SWAP, the following were identified in relation to the SR 260 | US 60 corridor:

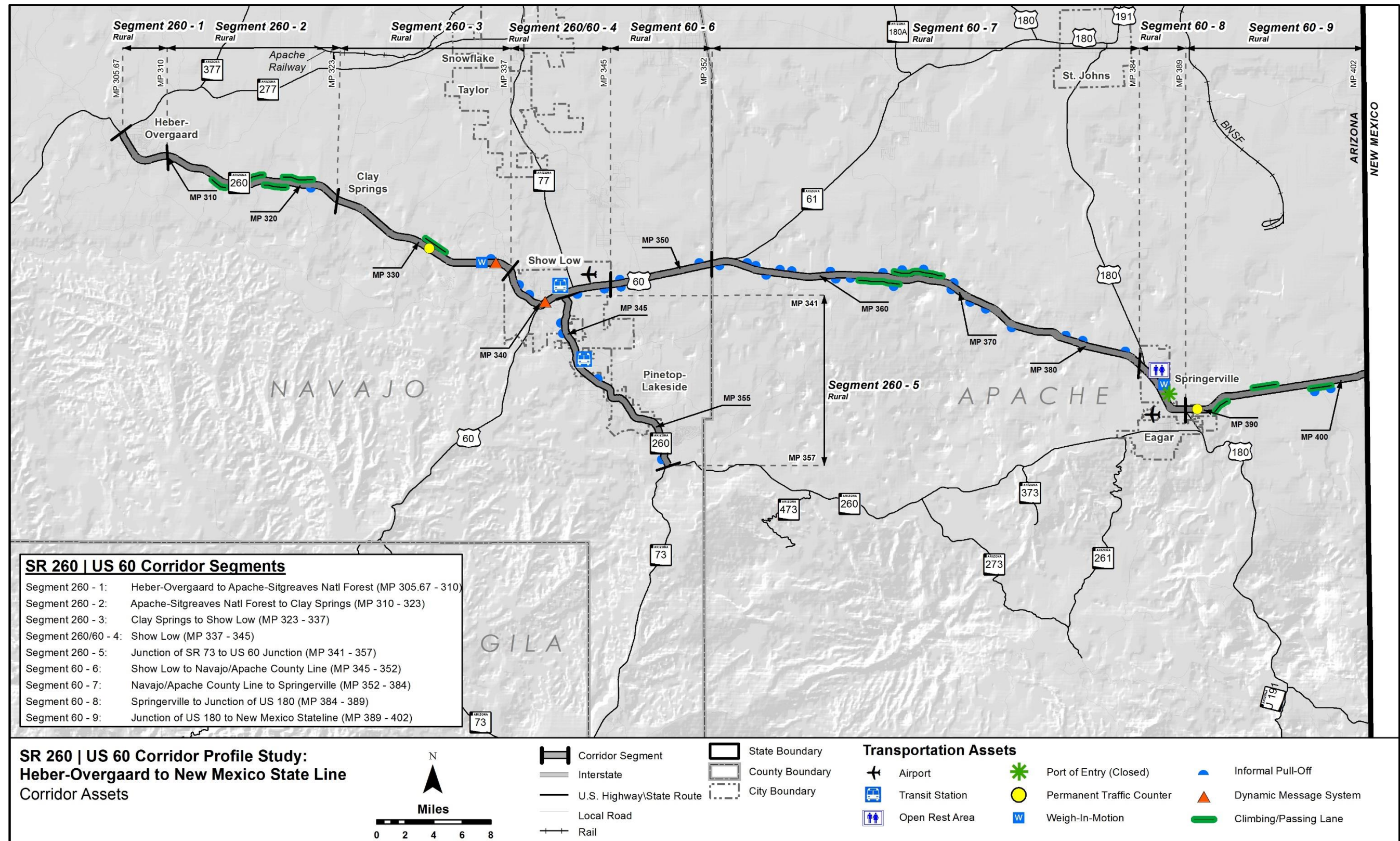
- Arizona Game and Fish Department (AGFD) Wildlife Waters are scattered near the corridor, specifically between Heber-Overgaard and Show Low. There is also one Wildlife Water location near Pinetop-Lakeside, and one between Show Low and Springerville. There are no Wildlife Waters that intersect the corridor.
- Arizona Important Bird Areas: The eastern portion of the corridor, specifically between Springerville and US 180, intersects the Upper Little Colorado River Watershed Important Bird Area
- The corridor travels through allotments controlled by the Arizona State Land Department (ASLD) and the United States Forest Service
- Riparian areas include numerous crossings along SR 260 and US 60
- Arizona Wildlife Linkages: No missing linkages are noted, but potential Arizona Wildlife Linkage Zones were identified along SR 260 from MP 312 to MP 323 and along US 60 from MP 352 to the New Mexico State Line. Most of the SR 260 portion of the corridor has Arizona Habitat Blocks except within the urban limits of Heber-Overgaard, Pinedale, Show Low, and Pinetop-Lakeside
- According to the Species and Habitat Conservation Guide (SHCG), sensitive habitats that have moderate to high conservation potential exist along the entire corridor; these areas are located along the SR 260 portion of the corridor and the portion of US 60 between Show Low and MP 367
- Areas where Species of Greatest Conservation Need (SGCN) are high or moderately vulnerable are similar to the areas identified in the SHCG (see above), in addition to concentrations near Springerville
- Identified areas of moderate or high levels of Species of Economic and Recreational Importance (SERI) are near SR 260 | US 60, specifically with high levels along the US 60 portion of the corridor between Show Low and to Springerville

Corridor Assets

Corridor transportation assets are summarized in **Figure 3**. There are four passing lanes on the SR 260 portion of the corridor between MP 315 and MP 340 and five passing lanes on the US 60 portion of the corridor between MP 366 and MP 400.

Other assets include the U.S. Forest Service owned rest area (Springerville Rest Area US 60 WB MP 386), dynamic message signs (DMS) located SR 260 EB, MP 335.17; US 60 EB/WB MP 339.90. There is a Port of Entry (Springerville Port of Entry, now closed), two transit/bus stations, and 19 informal pull-offs.

Figure 3: Corridor Assets



1.6 Corridor Stakeholders and Input Process

A Technical Advisory Committee (TAC) was created comprised of representatives from key stakeholders. TAC meetings will be held at key milestones to present results and obtain feedback. In addition, several meetings plan to be conducted with key stakeholders between July 2017 and December 2017 to present the results and obtain feedback.

Key stakeholders identified for this study included:

- ADOT Northeast District
- ADOT Technical Groups
- NACOG
- AGFD
- ASLD
- Federal Highway Administration (FHWA)
- Apache-Sitgreaves National Forest
- White Mountain Apache Tribe

Two draft report documents will be prepared during the development of the CPS. The first draft document includes the corridor performance evaluation and needs assessment (this report). The second draft document will include the solution development, evaluation and prioritization. Both will be provided to the TAC for review and comment, then combined into a comprehensive final report.

1.7 Prior Studies and Recommendations

This study identified recommendations from previous studies, plans, and preliminary design documents. Studies, plans, and programs pertinent to the SR 260 | US 60 corridor were reviewed to understand the full context of future planning and design efforts within and around the study area. These studies are organized below into four categories: Framework and Statewide Studies, Regional Planning Studies, Planning Assistance for Rural Areas (PARAs) and Small Area Transportation Studies (SATS), and Design Concept Reports (DCRs) and Project Assessments (PAs).

Framework and Statewide Studies

- ADOT Bicycle and Pedestrian Plan Update (2013)
- ADOT Pedestrian Safety Action Plan (2017)
- ADOT Five-Year Transportation Facilities Construction Program (2018 – 2022)
- ADOT Climbing and Passing Lane Prioritization Study (2015)
- ADOT Arizona Key Commerce Corridors (2014)
- ADOT Arizona Multimodal Freight Analysis Study (2009)
- ADOT Arizona Ports of Entry Study (2013)
- ADOT Arizona State Airport Systems Plan (2008)
- ADOT Arizona State Freight Plan (2015)
- ADOT Arizona State Rail Plan (2011)
- AGFD Arizona State Wildlife Action Plan (2012) / Arizona Wildlife Linkages Assessment
- ADOT Arizona Statewide Dynamic Message Sign Master Plan (2011)
- ADOT Arizona Statewide Rail Framework Study (2010)
- ADOT Arizona Statewide Rest Area Study (2011)
- ADOT Arizona Statewide Shoulders Study (2015)
- ADOT Arizona Strategic Highway Safety Plan (2014)
- ADOT Arizona Roadway Departure Safety Implementation Plan (RDSIP) (2014)
- ADOT AASHTO U.S. Bicycle Route System (2015)
- ADOT Low Volume State Routes Study (2017)
- ADOT Statewide Transportation Planning Framework – Building a Quality Arizona (BQAZ) (2010)
- ADOT Eastern Arizona Framework Study (2009)
- ADOT What Moves You Arizona? Long-Range Transportation Plan (2010-2035)

Regional Planning Studies

- Apache County Comprehensive Plan (2004)
- NACOG, Regional Transportation Improvement Program (2017)
- Round Valley Multimodal Transportation Study (2012)
- Southern Navajo/Apache County Sub Regional Transportation Plan (2007)
- Roadway Capacity and Turn Lane Analysis: US 60 between SR 77 and Little Mormon Lake Road, Show Low, Arizona (2014)

Planning Assistance for Rural Areas and Small Area Transportation Studies

- Navajo County Central Region Transportation Study (2010)
- Snowflake/Taylor Multijurisdictional Transportation Plan (2011)
- Show Low Trails and Transit Connectivity Study (2014)
- Second Knolls Development Multimodal Transportation Study (2014)

Design Concept Reports and Project Assessments

- SR 260: Passing Lanes, PA (1999)
- SR 260: MP 342 - (2000)
- SR 260: Payson – DCR (2005)
- SR 260: Payson – Alternative Selection Report (2008)
- SR 260: Old Linden Road Show Low, Scoping Letter (2009)
- SR 260: Overgaard to US 60, DCR (2014)
- US 60: Show Low – MP 342, PA (2002)
- US 60: US Highway 60 East of Springerville, PA (2002)
- US 60: Show Low West, PA (2003)
- US 60: Extending Concrete Box Culvert and Widen Roadway, Scoping Letter (2003)

Summary of Prior Recommendations

Various studies and plans, including several DCRs and PAs, have recommended improvements to the SR 260 | US 60 corridor as shown in **Table 3** and **Figure 4**. They include, but are not limited to:

- Widening of numerous sections of SR 260 | US 60, some of which may require right-of-way acquisition, and many other proposed improvements associated with the recommended widening. Widening sections include:
 - Upgrading SR 260 to a four-lane divided highway from MP 309 to MP 340
 - Adding one general purpose lane to SR 260 in each direction between MP 340 and MP 357
 - Adding one general purpose lane in each direction on US 60 from SR 77 to US 191
 - Adding one lane to US 60 from SR 260 to SR 77
 - Shoulder widening in each direction on US 60 from MP 346 to MP 353 and MP 358 to MP 369 (Tier 1 recommendation)
- Climbing and passing lanes have been recommended on US 60 in both directions from MP 345 to MP 348 and in the eastbound direction from MP 357 to MP 360 by the Climbing and Passing Lane Prioritization Study
- Many intersections along SR 260 and US 60 in the Show Low area have recommendations for improvements or modernization efforts such as signal installation

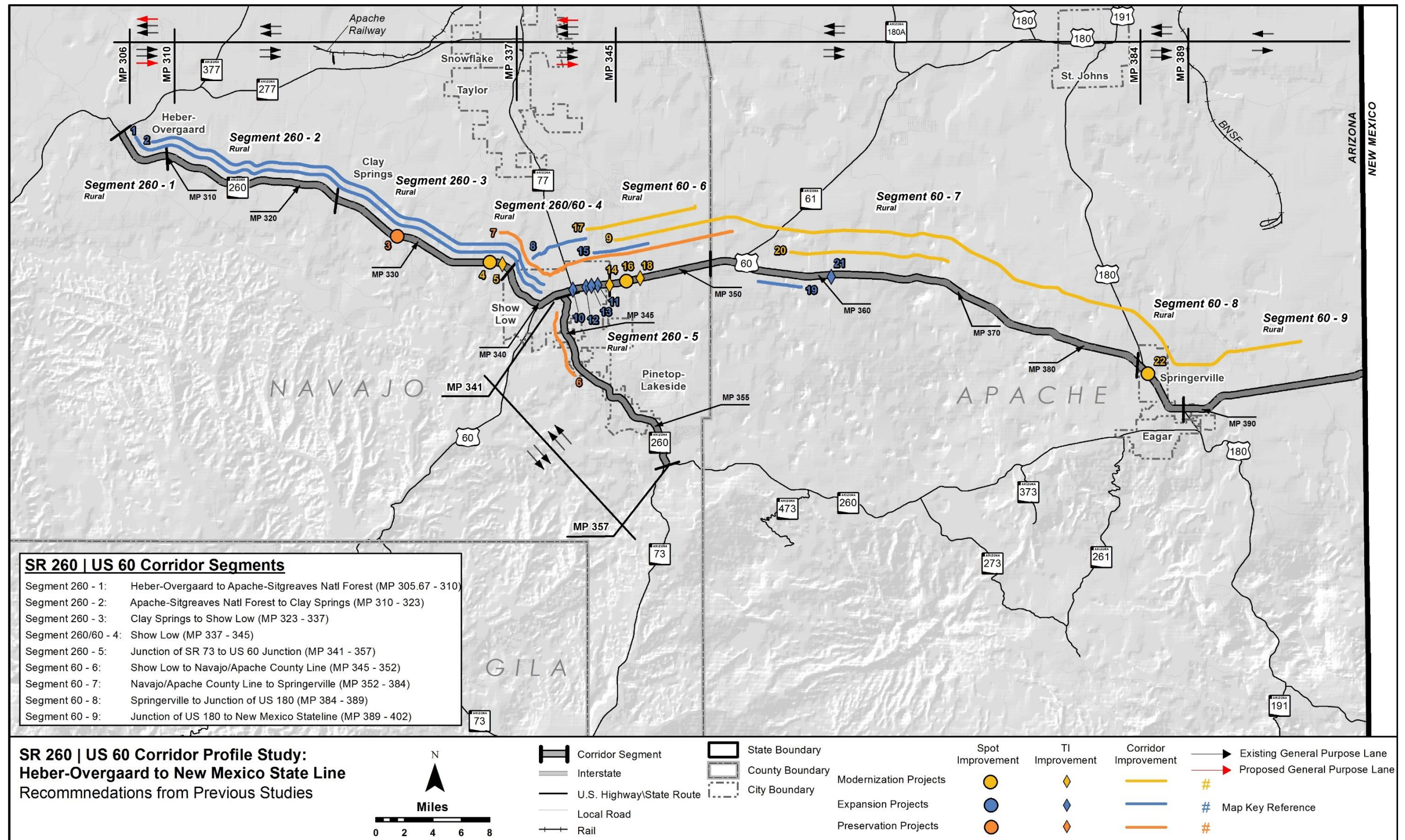
Table 3: Corridor Recommendations from Previous Studies

Map Key Ref. #	Begin MP	End MP	Length (miles)	Project Description	Investment Category (Preservation [P], Modernization[M], Expansion [E])			Status of Recommendation			Name of Study
					P	M	E	Program Year	Project No.	Environmental Documentation (Y/N)?	
SR 260											
1	306	340	34	Widen Roadway to Four-Lanes (Overgaard to Show Low) Widen Roadway to Six-Lanes (Show Low to Pinetop-Lakeside)			√	-	N/A	N	Eastern Arizona Framework Study (2009) bqAZ (2010)
2	309	340	31	Widen Roadway to Four-Lane Divided Highway			√	-	N/A	Y	SR 260 Overgaard to US 60 DCR (2014)
3	328	329	1.00	Construct Scour Retrofit: Mortensen Wash Bridge #1641	√			FY19	H8548	N	ADOT Five-Year Transportation Facilities Construction Program 2018 – 2022
4	335	335	0.00	EB DMS		√		-	N/A	N	Arizona Statewide Dynamic Message Master Plan (2011)
5	335	335	0.00	Intersection Signal: SR 260 and future relocation of Lone Pine Dam Road		√		2030	N/A	N	Southern Navajo/Apache County Sub Regional Transportation Plan (2007)
6	343	348	5.00	Pavement Rehabilitation: Church Street – Knottingham Lane	√			FY21	Fxxxx	N	ADOT Five-Year Transportation Facilities Construction Program 2018 – 2022
US 60											
7	336	353	17.00	Pavement Rehabilitation: Apache Sitgreaves to SR 61	√			FY19	Fxxxx	N	ADOT Five-Year Transportation Facilities Construction Program 2018 – 2022
8	340	398	58	Widen Roadway: <ul style="list-style-type: none">Six-lanes SR 260 to SR 77Four-lanes SR 77 to Springerville			√	-	N/A	N	Eastern Arizona Framework Study (2009) bqAZ (2010)
9	341	343	2	Widen Roadway Show Low to 40th Street			√	FY 2018	H5107	Y	ADOT Five-Year Transportation Facilities Construction Program 2016 – 2020
10	342.2	342.2	0.00	Grade Separated TI: US 60 and SR 77			√	2030	N/A	N	Southern Navajo/Apache County Sub Regional Transportation Plan (2007)

Table 3: Corridor Recommendations from Previous Studies (continued)

Map Key Ref. #	Begin MP	End MP	Length (miles)	Project Description	Investment Category (Preservation [P], Modernization[M], Expansion [E])			Status of Recommendation			Name of Study
					P	M	E	Program Year	Project No.	Environmental Documentation (Y/N)?	
US 60											
11	342.5	342.5	0.0	Exclusive WB turn lane toward 27 th place			√	-	N/A	N	Roadway Capacity and Turn Lane Analysis: US 60 between SR 77 and Little Mormon Lake Road Show Low, Arizona (2014)
12	343.3	343.3	0.0	Exclusive EB right turn lane at 40 th Street intersection			√	-	N/A	N	Roadway Capacity and Turn Lane Analysis: US 60 between SR 77 and Little Mormon Lake Road Show Low, Arizona (2014)
13	343.3	343.3	0.00	Intersection Signal: US 60 and Future Woolford Extension			√	2030	N/A	N	Southern Navajo/Apache County Sub Regional Transportation Plan (2007)
14	345	345	0.00	Intersection Signal: US 60 and Ski Hi Road Future Extension		√		2030	N/A	N	Southern Navajo/Apache County Sub Regional Transportation Plan (2007)
15	345	348	3.00	EB/WB Passing Lanes-Tier 1			√	-	N/A	N	ADOT Climbing and Passing Lane Prioritization Study (2015)
16	345	345	0.00	WB DMS		√		-	N/A	N	Arizona Statewide Dynamic Message Master Plan (2011)
17	346	353	7.00	EB/WB Shoulder Improvement-Tier 1		√		-	N/A	N	Statewide Shoulders Study (2015)
18	347	347	0.00	Intersection Signal: US 60 and Bourdon Ranch Road		√		-	N/A	N	Southern Navajo/Apache County Sub Regional Transportation Plan (2007)
19	357	360	3.00	EB Passing Lane-Tier 1			√	-	N/A	N	ADOT Climbing and Passing Lane Prioritization Study (2015)
20	358	369	11.00	EB/WB Shoulder Improvement Tier 1		√		-	N/A	N	Statewide Shoulders Study (2015)
21	360.6	360.6	0.00	Intersection Stop: US 60 and Future Vernon-McNary Road			√	-	N/A	N	Southern Navajo/Apache County Sub Regional Transportation Plan (2007)
22	385	385	0.00	WB DMS		√		-	N/A	N	Arizona Statewide Dynamic Message Master Plan (2011)

Figure 4: Corridor Recommendations from Previous Studies



2.0 CORRIDOR PERFORMANCE

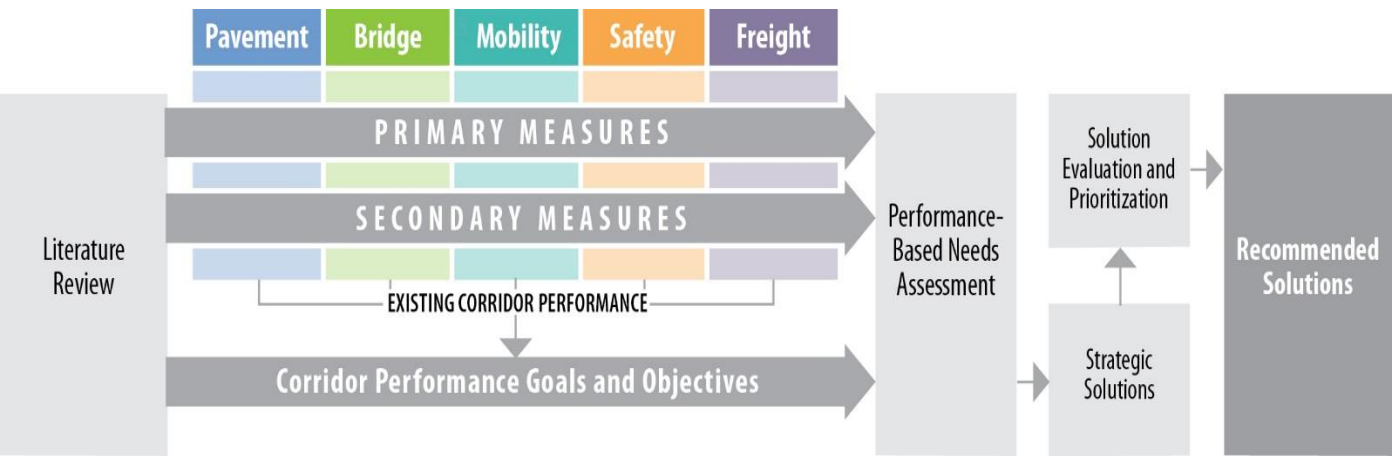
This chapter describes the evaluation of the existing performance of the SR 260 | US 60 corridor. A series of performance measures are used to assess the corridor. The results of the performance evaluation are used to define corridor needs relative to the long-term goals and objectives for the corridor.

2.1 Corridor Performance Framework

This study uses a performance-based process to define baseline corridor performance, diagnose corridor needs, develop corridor solutions, and prioritize strategic corridor investments. In support of this objective, a framework for the performance-based process was developed through a collaborative process involving ADOT and the CPS consultant teams.

Figure 5 illustrates the performance framework, which includes a two-tiered system of performance measures (primary and secondary) to evaluate baseline performance. The primary measures in each of five performance areas are used to define the overall health of the corridor, while the secondary measures identify locations that warrant further diagnostic investigation to delineate needs. Needs are defined as the difference between baseline corridor performance and established performance objectives.

Figure 5: Corridor Profile Performance Framework



The following five performance areas guide the performance-based corridor analyses:

- Pavement
- Bridge
- Mobility
- Safety
- Freight

These performance areas reflect national performance goals stated in *Moving Ahead for Progress in the 21st Century* (MAP-21):

- Safety: To achieve a significant reduction in traffic fatalities and serious injuries on all public roads
- Infrastructure Condition: To maintain the highway infrastructure asset system in a state of good repair
- Congestion Reduction: To achieve a significant reduction in congestion on the National Highway System
- System Reliability: To improve the efficiency of the surface transportation system
- Freight Movement and Economic Vitality: To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development
- Environmental Sustainability: To enhance the performance of the transportation system while protecting and enhancing the natural environment
- Reduced Project Delivery Delays: To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion

The MAP-21 performance goals were considered in the development of ADOT's P2P process, which integrates transportation planning with capital improvement programming and project delivery. Because the P2P program requires the preparation of annual transportation system performance reports using the five performance areas adopted for the CPS, consistency is achieved in the performance measures used for various ADOT analysis processes.

The performance measures include five primary measures: Pavement Index, Bridge Index, Mobility Index, Safety Index, and Freight Index. Additionally, a set of secondary performance measures provides for a more detailed analysis of corridor performance.

Each of the primary and secondary performance measures is comprised of one or more quantifiable indicators. A three-level scale was developed to standardize the performance scale across the five performance areas, with numerical thresholds specific to each performance measure:

- Good/Above Average Performance** – Rating is above the identified desirable/average range
- Fair/Average Performance** – Rating is within the identified desirable/average range
- Poor/Below Average Performance** – Rating is below the identified desirable/average range

Table 4 provides the complete list of primary and secondary performance measures for each of the five performance areas.

Table 4: Corridor Performance Measures

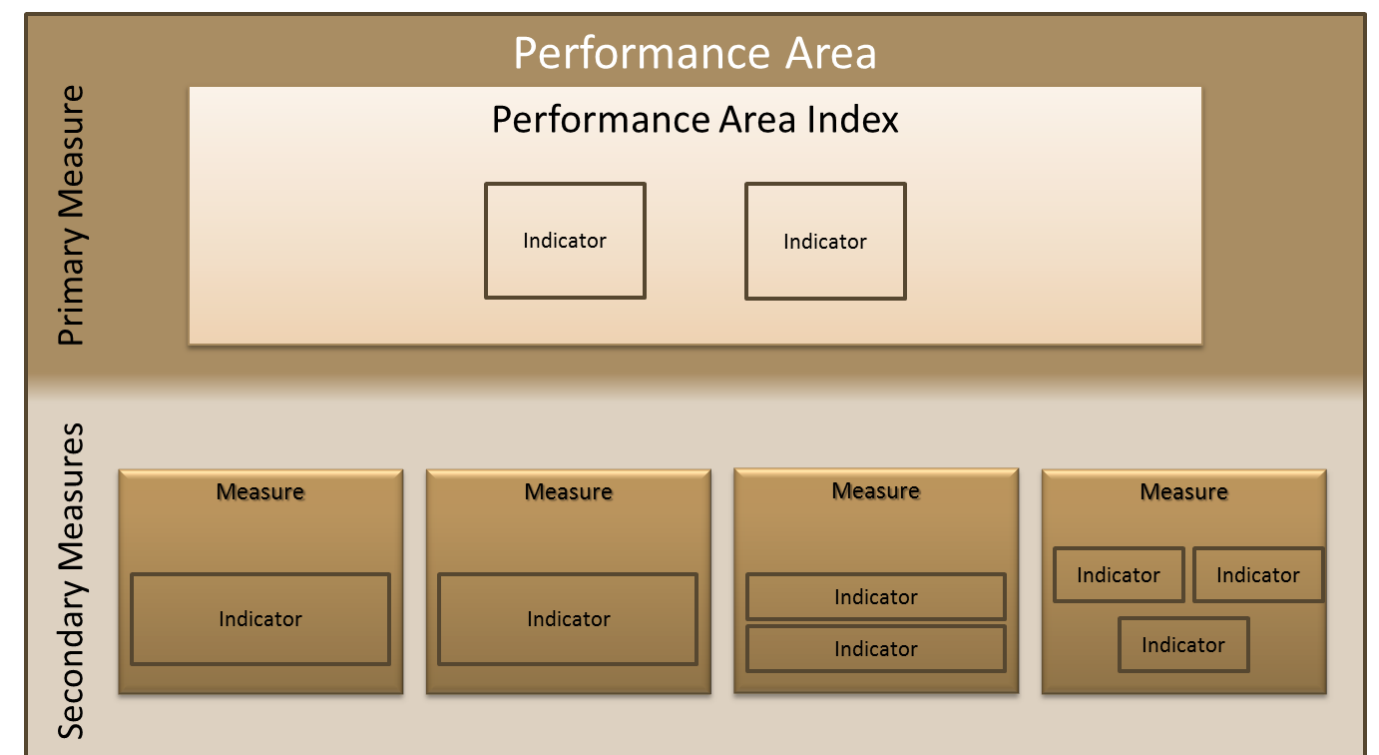
Performance Area	Primary Measure	Secondary Measures
Pavement	Pavement Index Based on a combination of International Roughness Index and cracking	<ul style="list-style-type: none"> Directional Pavement Serviceability Pavement Failure Pavement Hot Spots
Bridge	Bridge Index Based on lowest of deck, substructure, superstructure and structural evaluation rating	<ul style="list-style-type: none"> Bridge Sufficiency Functionally Obsolete Bridges Bridge Rating Bridge Hot Spots
Mobility	Mobility Index Based on combination of existing and future daily volume-to-capacity ratios	<ul style="list-style-type: none"> Future Congestion Peak Congestion Travel Time Reliability Multimodal Opportunities
Safety	Safety Index Based on frequency of fatal and incapacitating injury crashes	<ul style="list-style-type: none"> Directional Safety Index Strategic Highway Safety Plan Emphasis Areas Crash Unit Types Safety Hot Spots
Freight	Freight Index Based on bi-directional truck planning time index	<ul style="list-style-type: none"> Recurring Delay Non-Recurring Delay Closure Duration Bridge Vertical Clearance Bridge Vertical Clearance Hot Spots

The general template for each performance area is illustrated in **Figure 6**.

The guidelines for performance measure development are:

- Indicators and performance measures for each performance area should be developed for relatively homogeneous corridor segments
- Performance measures for each performance area should be tiered, consisting of primary measure(s) and secondary measure(s)
- Primary and secondary measures should assist in identifying those corridor segments that warrant in-depth diagnostic analyses to identify performance-based needs and a range of corrective actions known as solution sets
- One or more primary performance measures should be used to develop a Performance Index to communicate the overall health of a corridor and its segments for each performance area; the Performance Index should be a single numerical index that is quantifiable, repeatable, scalable, and capable of being mapped; primary performance measures should be transformed into a Performance Index using mathematical or statistical methods to combine one or more data fields from an available ADOT database
- One or more secondary performance measure indicators should be used to provide additional details to define corridor locations that warrant further diagnostic analysis; secondary performance measures may include the individual indicators used to calculate the Performance Index and/or “hot spot” features

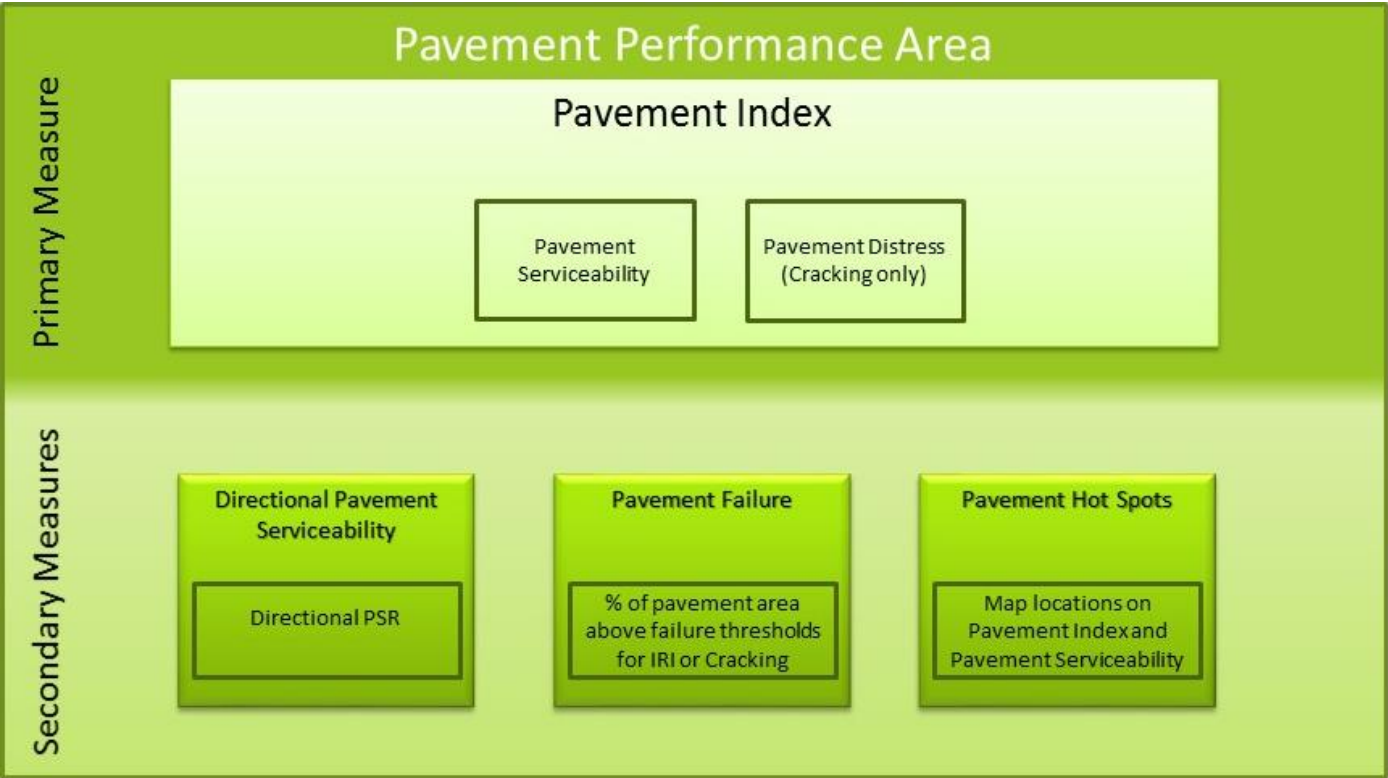
Figure 6: Performance Area Template



2.2 Pavement Performance Area

The Pavement performance area consists of a primary measure (Pavement Index) and three secondary measures, as shown in **Figure 7**. These measures assess the condition of the existing pavement along the SR 260 | US 60 corridor. The detailed calculations and equations developed for each measure are available in **Appendix B** and the performance data for this corridor is contained in **Appendix C**.

Figure 7: Pavement Performance Measures



Primary Pavement Index

The Pavement Index is calculated using two pavement condition ratings: the Pavement Serviceability Rating (PSR) and the Pavement Distress Index (PDI).

The PSR is extracted from the International Roughness Index (IRI), a measurement of pavement roughness based on field-measured longitudinal roadway profiles. The PDI is extracted from the Cracking Rating (CR), a field-measured sample from each mile of highway.

Both the PSR and PDI use a 0 to 5 scale with 0 representing the lowest performance and 5 representing the highest. The Pavement Index for each segment is a weighted average of the directional ratings based on the number of travel lanes. Therefore, the condition of a section with more travel lanes will have a greater influence on the resulting segment Pavement Index than the condition of a section with fewer travel lanes.

Each corridor segment is rated on a scale with other segments in similar operating environments. Within the Pavement performance area, the relevant operating environments are designated as interstate and non-interstate segments. For the SR 260 | US 60 corridor, the following operating environment was identified:

- Non-interstate: all segments

Secondary Pavement Measures

Three secondary measures provide an in-depth evaluation of the different characteristics of pavement performance.

Directional Pavement Serviceability

- Weighted average (based on number of lanes) of the PSR for the pavement in each direction of travel

Pavement Failure

- Percentage of pavement area rated above failure thresholds for IRI or Cracking

Pavement Hot Spots

- A Pavement “hot spot” exists where a given one-mile section of roadway rates as being in “poor” condition
- Highlights problem areas that may be under-represented in a segment average; this measure is recorded and mapped, but not included in the Pavement performance area rating calculations

Pavement Performance Results

The Pavement Index provides a high-level assessment of the pavement condition for the corridor and for each segment. The three secondary measures provide more detailed information to assess pavement performance.

Based on the results of this analysis, the following observations were made:

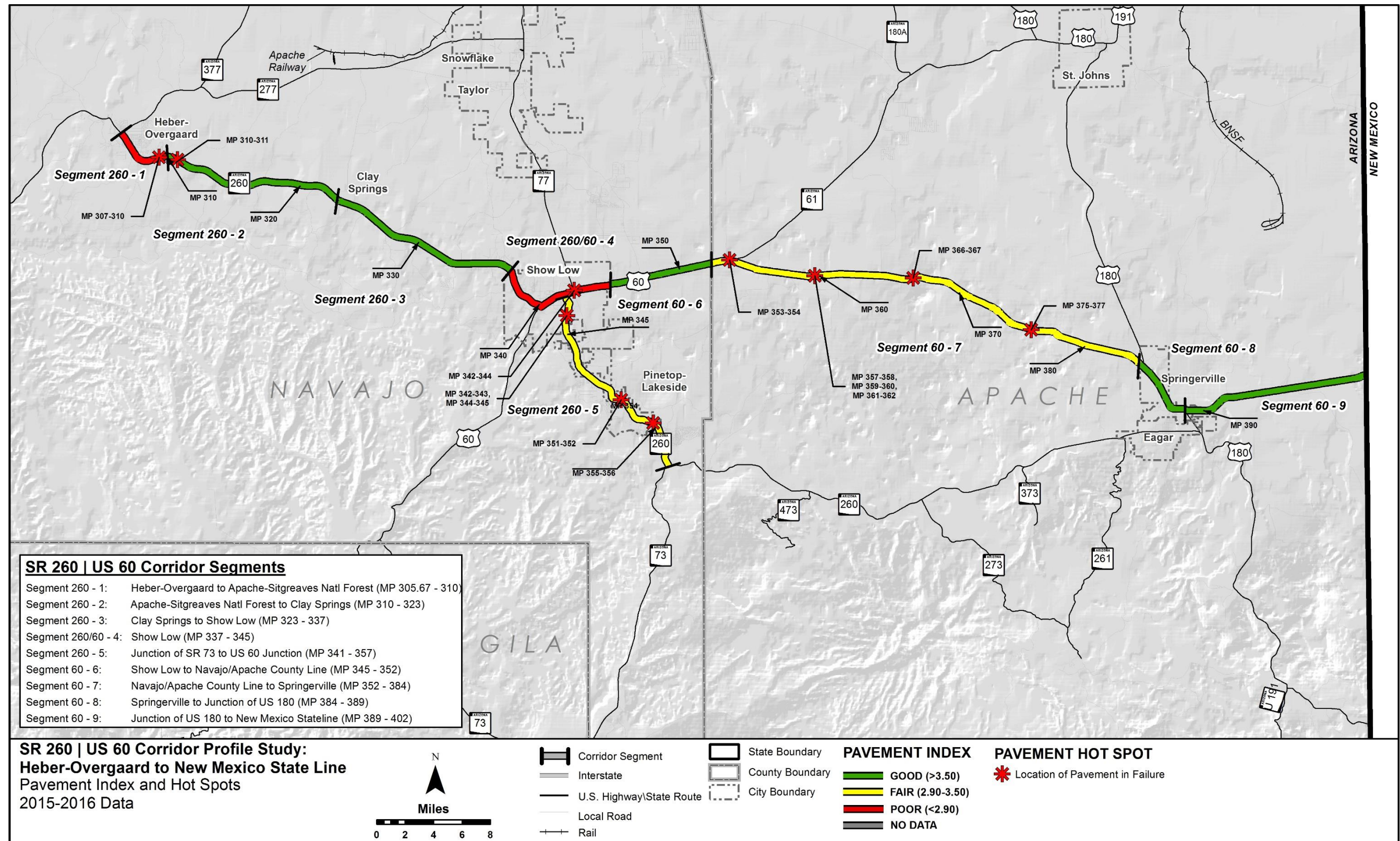
- The weighted average of the Pavement Index shows “fair” overall performance for the SR 260 | US 60 corridor
- According to the Pavement Index, pavement is in “good” condition with the exception of Segments 260-1, 260|60-4, 60-5 and 60-7
- Segments 260-1, 260|60-4, 60-5, and 60-7 have “poor” % Pavement Area Failure ratings
- Pavement hot spots along the corridor include:
 - Segment 260-1 MP 307-310
 - Segment 260-2 MP 310-311
 - Segment 260|60-4 MP 342-344
 - Segment 260-5 MP 342-343, 344-345, 351-352, 354-355
 - Segment 60-7 MP 353-354, 357-358, 359-360, 361-362, 366-367, 375-377

Table 5 summarizes the Pavement performance results for the SR 260 | US 60 corridor. **Figure 8** illustrates the primary Pavement Index performance and locations of Pavement hot spots along the SR 260 | US 60 corridor. Maps for each secondary measure can be found in **Appendix A**.

Table 4: Pavement Performance

Segment #	Segment Length (miles)	Pavement Index	Directional PSR		% Area Failure
			EB	WB	
260-1	4	1.89	3.41		60.0%
260-2	13	3.87	4.04		7.7%
260-3	14	4.02	3.76		0.0%
260 60-4	8	2.86	3.16		25.0%
60-5	16	3.15	3.85	3.73	21.9%
60-6	7	3.71	3.66		0.0%
60-7	32	3.19	3.53		21.9%
60-8	5	3.73	3.65		0.0%
60-9	13	4.25	3.93		0.0%
Weighted Corridor Average		3.47	3.69	3.57	14%
SCALES					
Performance Level		Non-Interstate			
Good		> 3.50			< 5%
Fair		2.90 - 3.50			5% - 20%
Poor		< 2.90			> 20%

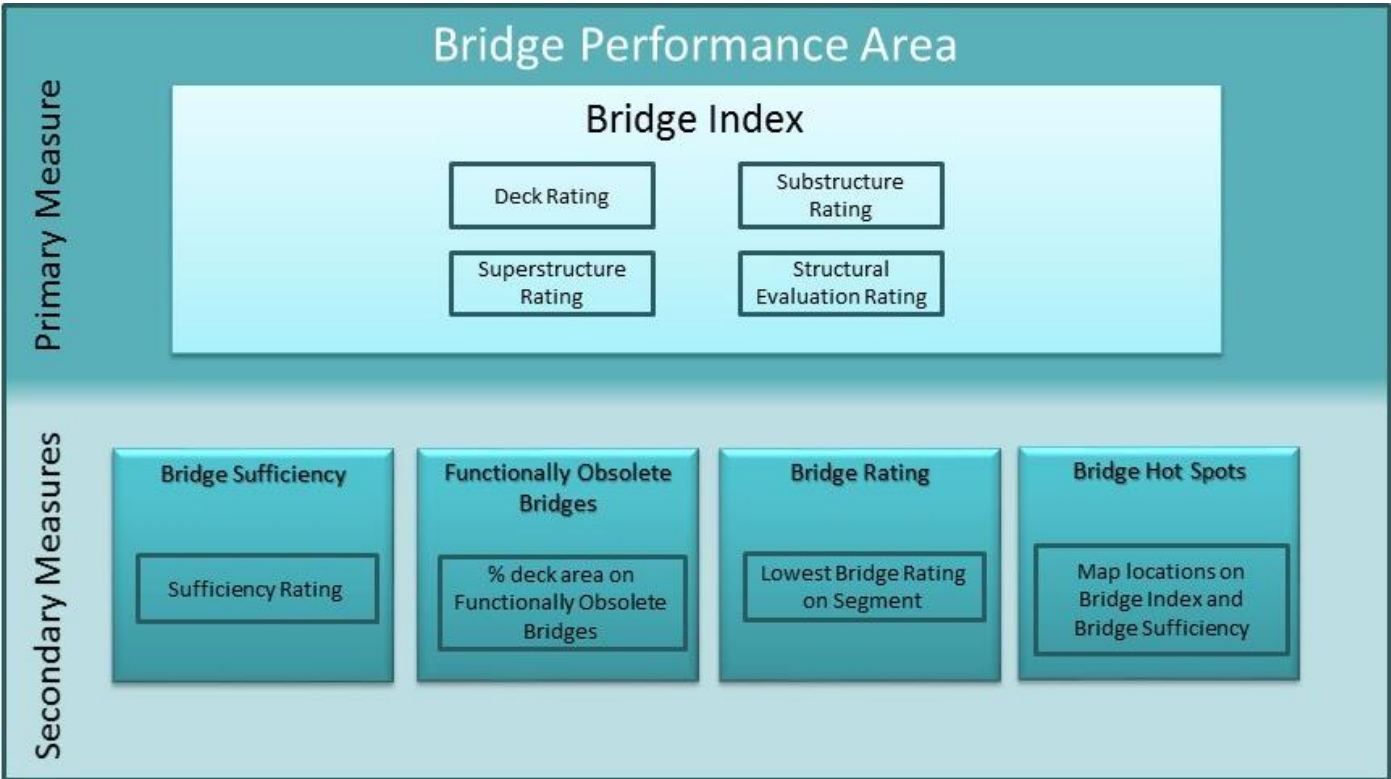
Figure 8: Pavement Performance



2.3 Bridge Performance Area

The Bridge performance area consists of a primary measure (Bridge Index) and four secondary measures, as shown in **Figure 9**. These measures assess the condition of the existing bridges along the SR 260 | US 60 corridor. Only bridges that carry mainline traffic or bridges that cross the mainline are included in the calculation. The detailed calculations and equations developed for each measure are available in **Appendix B** and the performance data for this corridor is contained in **Appendix C**.

Figure 9: Bridge Performance Measures



Primary Bridge Index

The Bridge Index is calculated based on the use of four different bridge condition ratings from the ADOT Bridge Database, also known as the Arizona Bridge Information and Storage System (ABISS). The four ratings are the Deck Rating, Substructure Rating, Superstructure Rating, and Structural Evaluation Rating. These ratings are based on inspection reports and establish the structural adequacy of each bridge. The performance of each individual bridge is established by using the lowest of these four ratings. The use of these ratings, and the use of the lowest rating, is consistent with the approach used by the ADOT Bridge Group to assess the need for bridge rehabilitation. The Bridge Index is calculated as a weighted average for each segment based on deck area.

Secondary Bridge Measures

Four secondary measures provide an in-depth evaluation of the characteristics of each bridge:

Bridge Sufficiency

- Multipart rating includes structural adequacy and safety factors as well as functional aspects such as traffic volume and length of detour
- Rates the structural and functional sufficiency of each bridge on a 100-point scale

Functionally Obsolete Bridges

- Percentage of total deck area in a segment that is on functionally obsolete bridges
- Identifies bridges that no longer meet standards for current traffic volumes, lane width, shoulder width, or bridge rails
- A bridge that is functionally obsolete may still be structurally sound

Bridge Rating

- The lowest rating of the four bridge condition ratings (substructure, superstructure, deck, and structural evaluation) on each segment
- Identifies lowest performing evaluation factor on each bridge

Bridge Hot Spots

- A Bridge “hot spot” is identified where a given bridge has a bridge rating of 4 or lower or multiple ratings of 5 between the deck, superstructure, and substructure ratings
- Identifies particularly low-performing bridges or those that may decline to low performance in the immediate future

Bridge Performance Results

The Bridge Index provides a high-level assessment of the structural condition of bridges for the corridor and for each segment. The four secondary measures provide more detailed information to assess bridge performance.

Based on the results of this analysis, the following observations were made:

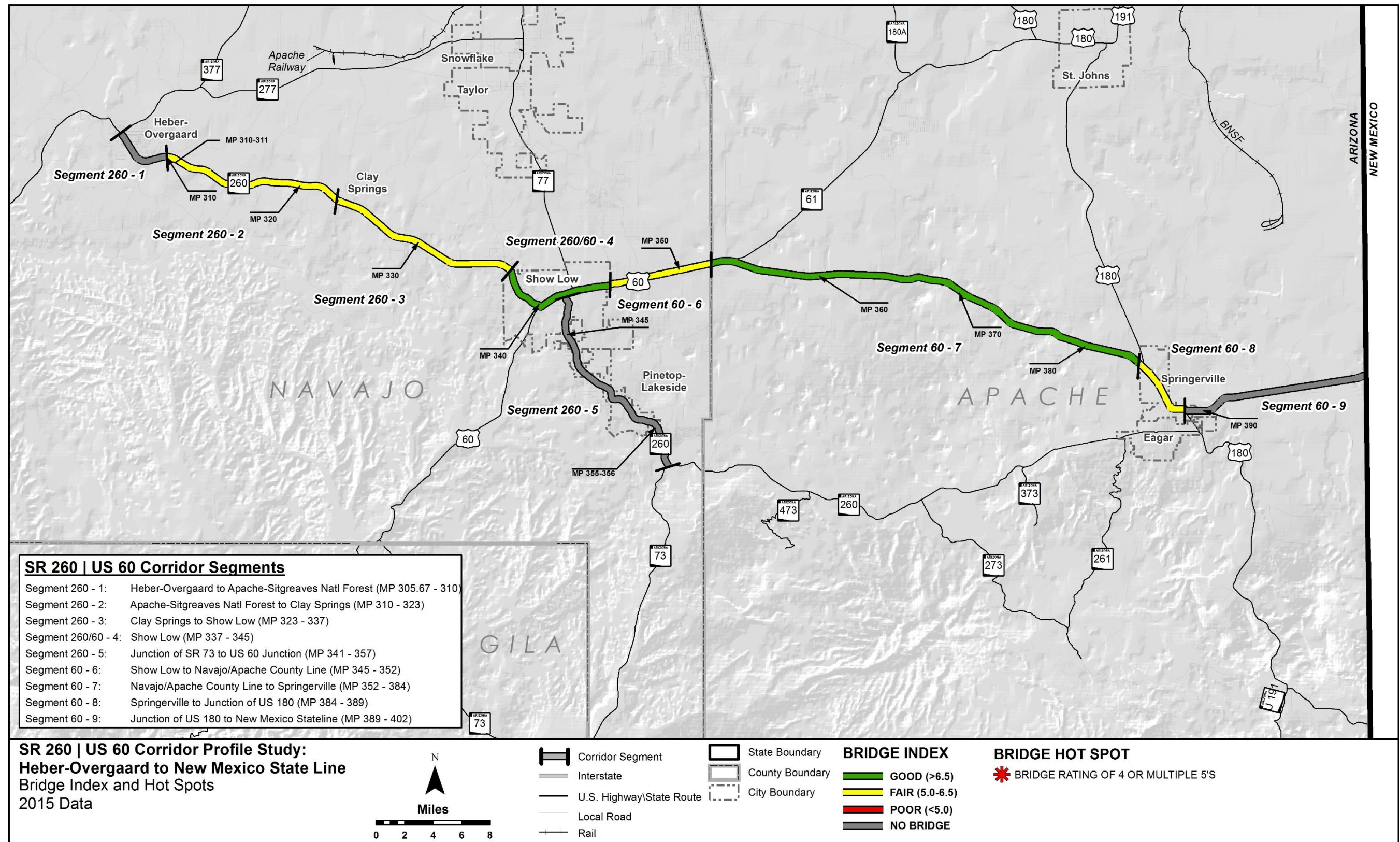
- The weighted average of the Bridge Index shows “fair” overall performance for the SR 260 | US 60 corridor
- Three segments do not contain bridges
- All segments that contain bridges have a “fair” or “good” Bridge Index rating
- All segments that contain bridges have a “good” Sufficiency Rating
- There are no functionally obsolete bridges
- All segments that contain bridges have a “fair” or “good” Lowest Bridge Rating
- There are no bridge hot spots along the corridor

Table 6 summarizes the Bridge performance results for the SR 260 | US 60 corridor. **Figure 10** illustrates the primary Bridge Index performance and locations of Bridge hot spots along the SR 87/SR 260/SR 77 corridor. Maps for each secondary measure can be found in **Appendix A**.

Table 6: Bridge Performance

Segment #	Segment Length (miles)	# of Bridges	Bridge Index	Sufficiency Rating	% of Deck Area on Functionally Obsolete Bridges	Lowest Bridge Rating
260-1	4	0	No Bridges			
260-2	13	2	6.00	94.10	0.0%	6
260-3	14	1	6.00	92.80	0.0%	6
260 60-4	8	0	7.00	85.00	0.0%	7
60-5	16	1	No Bridges			
60-6	7	1	6.00	82.20	0.0%	6
60-7	32	1	7.00	96.30	0.0%	7
60-8	5	1	6.00	81.10	0.0%	6
60-9	13	0	No Bridges			
Weighted Corridor Average			6.29	89.37	0%	6.29
SCALES						
Performance Level			All			
Good			> 6.5	> 80	< 12%	> 6
Fair			5.0 - 6.5	50 - 80	12% - 40%	5 - 6
Poor			< 5.0	< 50	> 40 %	< 5

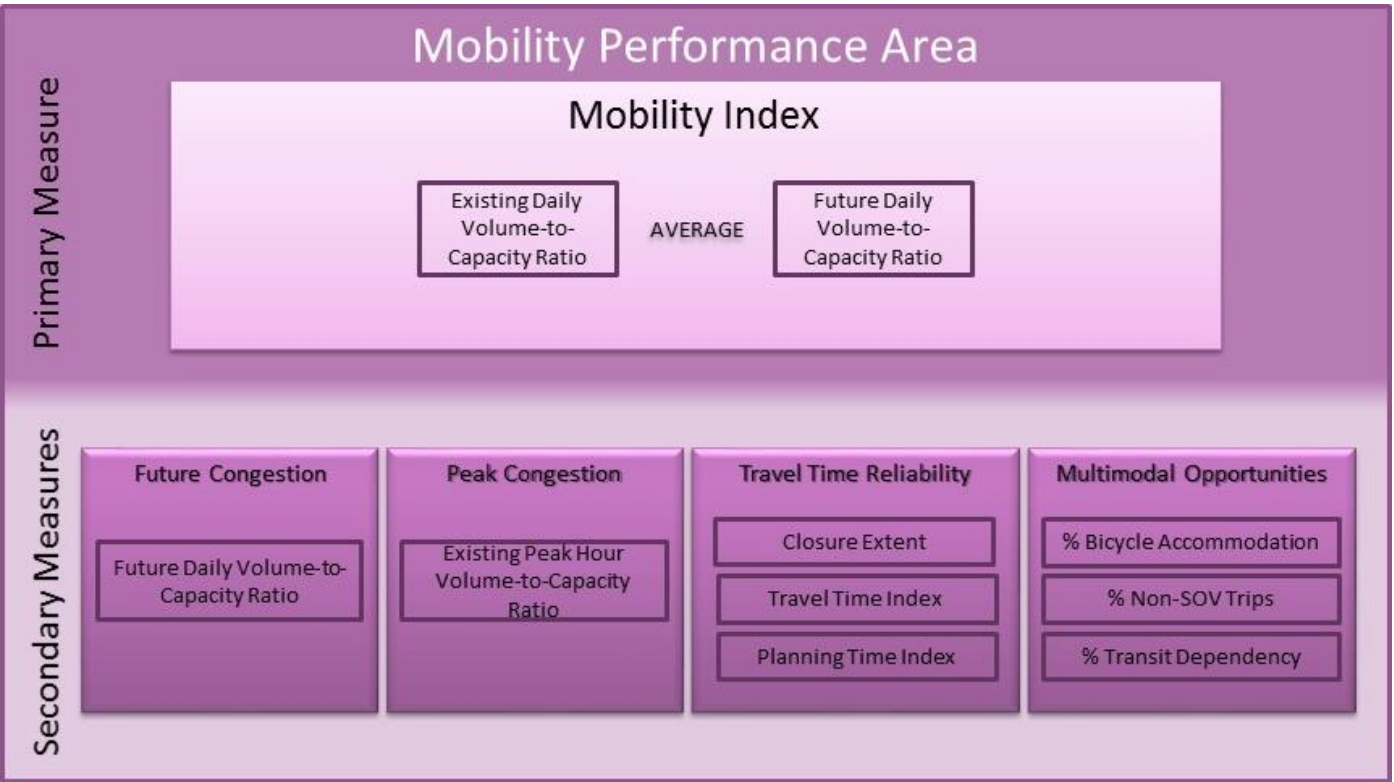
Figure 10: Bridge Performance



2.4 Mobility Performance Area

The Mobility performance area consists of a primary measure (Mobility Index) and four secondary measures, as shown in **Figure 11**. These measures assess the condition of existing mobility along the SR 260 | US 60 corridor. The detailed calculations and equations developed for each measure are available in **Appendix B** and the performance data for this corridor is contained in **Appendix C**.

Figure 11: Mobility Performance Measures



Primary Mobility Index

The Mobility Index is an average of the existing (2014) daily volume-to-capacity (V/C) ratio and the future (2035 AZTDM) daily V/C ratio for each segment of the corridor. The V/C ratio is an indicator of the level of congestion. This measure compares the average annual daily traffic (AADT) volume to the capacity of the corridor segment as defined by the service volume for level of service (LOS) E. By using the average of the existing and future year daily volumes, this index measures the level of daily congestion projected to occur in approximately ten years (2025) if no capacity improvements are made to the corridor.

Each corridor segment is rated on a scale with other segments in similar operating environments. Within the Mobility performance area, the relevant operating environments are urban vs. rural setting and interrupted flow (e.g., signalized at-grade intersections are present) vs. uninterrupted

flow (e.g., controlled access grade-separated conditions such as a freeway or interstate highway). For the SR 260 | US 60 corridor, the following operating environments were identified:

- Rural Uninterrupted Flow: Segments 260-1, 260-2, 260-3, 60-6, 60-7, and 60-9
- Rural Interrupted Flow: Segments 260-4, 260-5, and 60-8

Secondary Mobility Measures

Four secondary measures provide an in-depth evaluation of operational characteristics of the corridor:

Future Congestion – Future Daily V/C

- The future (2035 AZTDM) daily V/C ratio; this measure is the same value used in the calculation of the Mobility Index
- Provides a measure of future congestion if no capacity improvements are made to the corridor

Peak Congestion – Existing Peak Hour V/C

- The peak hour V/C ratio for each direction of travel
- Provides a measure of existing peak hour congestion during typical weekdays

Travel Time Reliability– Three separate travel time reliability indicators together provide a comprehensive picture of how much time may be required to travel within the corridor:

- Closure Extent:
 - The average number of instances a particular milepost is closed per year per mile on a given segment of the corridor in a specific direction of travel; a weighted average was applied to each closure that takes into account the distance over which the closure occurs
 - Closures related to crashes, weather, or other incidents are a significant contributor to non-recurring delays; construction-related closures were excluded from the analysis
- Directional Travel Time Index (TTI):
 - The ratio of the average peak period travel time to the free-flow travel time (based on the posted speed limit) in a given direction
 - The TTI recognizes the delay potential from recurring congestion during peak periods; different thresholds are applied to uninterrupted flow (freeways) and interrupted flow (non-freeways) to account for flow characteristics
- Directional Planning Time Index (PTI):
 - The ratio of the 95th percentile travel time to the free-flow travel time (based on the posted speed limit) in a given direction
 - The PTI recognizes the delay potential from non-recurring delays such as traffic crashes, weather, or other incidents; different thresholds are applied to uninterrupted flow (freeways) and interrupted flow (non-freeways) to account for flow characteristics

- The PTI indicates the amount of time in addition to the typical travel time that should be allocated to make an on-time trip 95% of the time in a given direction

Multimodal Opportunities – Three multimodal opportunity indicators reflect the characteristics of the corridor that promote alternate modes to the single occupancy vehicle (SOV) for trips along the corridor:

- % Bicycle Accommodation:
 - Percentage of the segment that accommodates bicycle travel; bicycle accommodation on the roadway or on shoulders varies depending on traffic volumes, speed limits, and surface type
 - Encouraging bicycle travel has the potential to reduce automobile travel, especially on non-interstate highways
- % Non-SOV Trips:
 - The percentage of trips (less than 50 miles in length) by non-SOVs
 - The percentage of non-SOV trips in a corridor gives an indication of travel patterns along a section of roadway that could benefit from additional multimodal options
- % Transit Dependency:
 - The percentage of households that have zero or one automobile and households where the total income level is below the federally defined poverty level
 - Used to track the level of need among those who are considered transit dependent and more likely to utilize transit if it is available

Mobility Performance Results

The Mobility Index provides a high-level assessment of mobility conditions for the corridor and for each segment. The four secondary measures provide more detailed information to assess mobility performance.

Based on the results of this analysis, the following observations were made:

- The weighted average of the Mobility Index shows “good” overall performance for the SR 260 | US 60 corridor, except Segment 260-5 which is “fair”
- During the existing peak hour, traffic operations are “good” for all segments except Segments 260|60-4 and 260-5
- Segments 260|60-4 and 260-5 are anticipated to have “fair” performance in the future, according to the Future Daily V/C performance indicator, with the remaining segments with “good” performance
- Segments 260|60-4, 60-6, 60-7, 60-8, and 60-9 have “poor” performance in the Closure Extent performance indicator for EB travel; Segments 260-1, 260-2, 260-3, 260|60-4, and 260-5 have “poor” performance in the Closure Extent performance indicator for WB travel
- The TTI performance indicator shows that all segments on the SR 260 | US 60 corridor performance at “fair” or “good” performance levels

- The PTI performance indicator shows many of the SR 260 | US 60 segments, both NB and SB, have a range of “good”, “fair” and “poor” performance in terms of reliability
- Most of the segments show “good” or “fair” performance for non-SOV trips, indicating single occupant trips are more common
- A majority of the corridor shows “poor” performance in % Bicycle Accommodation, indicating most of the corridor has narrow shoulders, with the exception of Segments 260-1, 60-8, and 60-9, which have “good” performance

Table 7 summarizes the Mobility performance results for the SR 260 | US 60 corridor. **Figure 12** illustrates the primary Mobility Index performance along the SR 260 | US 60 corridor. Maps for each secondary measure can be found in **Appendix A**.

Table 7: Mobility Performance

Segment #	Segment Length (miles)	Mobility Index	Future Daily V/C	Existing Peak Hour V/C		Closure Extent (instances/milepost/year/mile)		Directional TTI (all vehicles)		Directional PTI (all vehicles)		% Bicycle Accommodation	% Non-Single Occupancy Vehicle (SOV) Trips
				EB	WB	EB	WB	EB	WB	EB	WB		
260-1 ^{2^} ^	4	0.10	0.09	0.12	0.12	0.16	1.84	1.01	1.00	1.75	1.84	92%	16.8%
260-2 ^{2^} ^	13	0.29	0.29	0.31	0.31	0.00	1.45	1.07	1.02	1.36	1.43	0%	13.9%
260-3 ^{2^} ^	14	0.18	0.19	0.22	0.24	0.51	1.46	1.07	1.05	1.26	1.52	5%	17.3%
260/60-4 ^{2^} *	8	0.70	0.84	0.67	0.62	1.16	0.79	1.16	1.18	3.45	5.14	54%	17.9%
260-5 ^{2^} *	16	0.75	0.90	0.75	0.73	0.05	1.41	1.12	1.10	2.60	3.57	50%	16.4%
60-6 ^{2^} ^	7	0.46	0.52	0.31	0.29	1.95	0.15	1.19	1.21	2.07	3.52	0%	12.2%
60-7 ^{2^} ^	32	0.24	0.25	0.20	0.20	3.30	0.08	1.09	1.04	2.02	1.49	5%	13.8%
60-8 ^{2^} *	5	0.26	0.30	0.21	0.30	2.46	0.20	1.17	1.19	4.11	8.55	98%	16.9%
60-9 ^{2^} ^	13	0.04	0.04	0.04	0.04	2.27	0.18	1.16	1.05	2.25	2.77	100%	0.0%
Weighted Corridor Average		0.33	0.37	0.31	0.31	1.59	0.74	1.11	1.07	2.15	2.65	33%	13%
SCALES													
Performance Level		Urban Rural		All		Uninterrupted Interrupted		All					
Good		< 0.71 ¹ < 0.56 ²		< 0.22		< 1.15^ < 1.30*		< 1.30^ < 3.00*		> 90%		> 17%	
Fair		0.71 - 0.89 ¹ 0.56 - 0.76 ²		0.22 – 0.62		1.15 - 1.33^ 1.30 - 2.00*		1.30 - 1.50^ 3.00 - 6.00*		60% - 90%		11% - 17%	
Poor		> 0.89 ¹ > 0.76 ²		> 0.62		> 1.33^ > 2.00*		> 1.50^ > 6.00*		< 60%		< 11%	

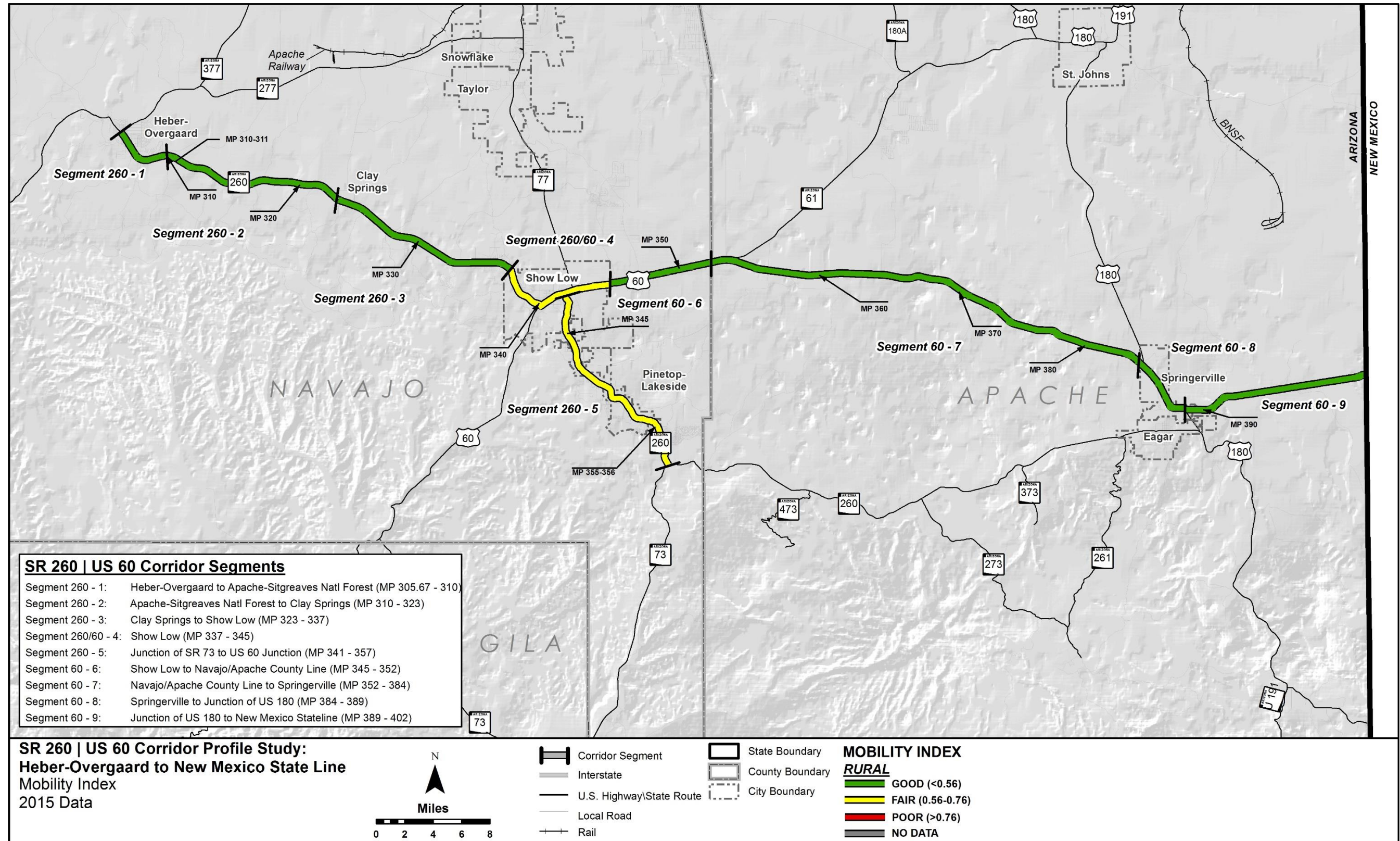
¹Urban Operating Environment

²Rural Operating Environment

^Uninterrupted Flow Facility

*Interrupted Flow Facility

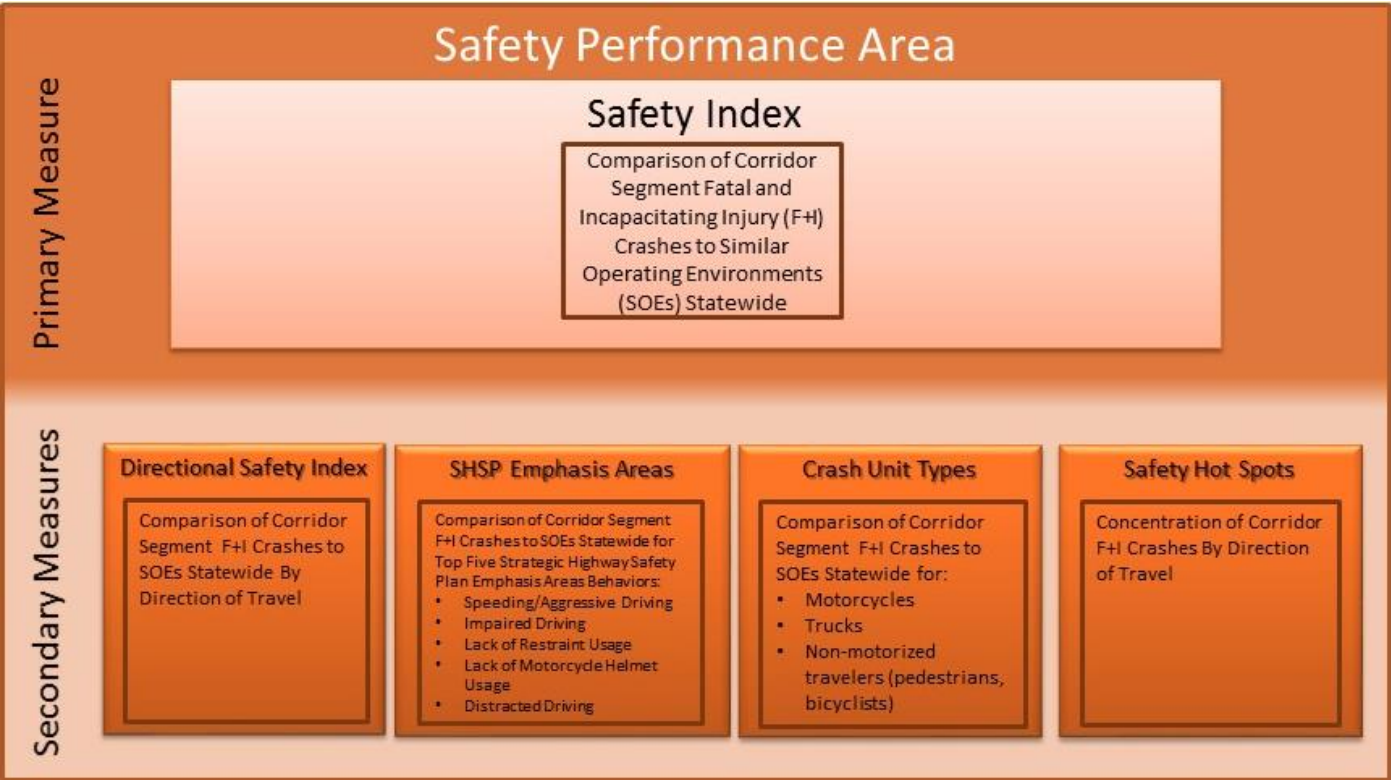
Figure 12: Mobility Performance



2.5 Safety Performance Area

The Safety performance area consists of a primary measure (Safety Index) and four secondary measures, as illustrated in **Figure 13**. All measures relate to crashes that result in fatal and incapacitating injuries, as these types of crashes are the emphasis of the ADOT Strategic Highway Safety Plan (SHSP), FHWA, and MAP-21. The detailed calculations and equations developed for each measure are available in **Appendix B** and the performance data for this corridor is contained in **Appendix C**.

Figure 13: Safety Performance Measures



Primary Safety Index

The Safety Index is based on the bi-directional frequency and rate of fatal and incapacitating injury crashes, the relative cost of those types of crashes, and crash occurrences on similar roadways in Arizona. According to ADOT’s 2010 Highway Safety Improvement Program Manual, fatal crashes have an estimated cost that is 14.5 times the estimated cost of incapacitating injury crashes (\$5.8 million compared to \$400,000).

Each corridor segment is rated on a scale by comparing the segment score with the average statewide score for similar operating environments. Because crash frequencies and rates vary depending on the operating environment of a particular roadway, statewide values were developed for similar operating environments defined by functional classification, urban vs. rural setting,

number of travel lanes, and traffic volumes. For the SR 260 | US 60 corridor, the following operating environments were identified:

- 4 or 5 Lane Undivided Highway: Segments 260-1, 260|60-4, 60-5, and 60-8
- 2 or 3 lane Undivided Highway: Segments 260-2, 260-3, 60-6, 60-9
- 2 or 3 or 4 Lane Divided Highway: Segment 60-7

Secondary Safety Measures

Four secondary measures provide an in-depth evaluation of the different characteristics of safety performance:

Directional Safety Index

- This measure is based on the directional frequency and rate of fatal and incapacitating injury crashes

SHSP Emphasis Areas

ADOT’s 2014 SHSP identified several emphasis areas for reducing fatal and incapacitating injury crashes. This measure compared rates of crashes in the top five SHSP emphasis areas to other corridors with a similar operating environment. The top five SHSP emphasis areas related to the following driver behaviors:

- Speeding and aggressive driving
- Impaired driving
- Lack of restraint usage
- Lack of motorcycle helmet usage
- Distracted driving

Crash Unit Types

- The percentage of total fatal and incapacitating injury crashes that involves crash unit types of motorcycles, trucks, or non-motorized travelers is compared to the statewide average on roads with similar operating environments

Safety Hot Spots

- The hot spot analysis identifies abnormally high concentrations of fatal and incapacitating injury crashes along the study corridor by direction of travel

For the Safety Index and the secondary safety measures, any segment that has too small of a sample size to generate statistically reliable performance ratings for a particular performance measure is considered to have “insufficient data” and is excluded from the safety performance evaluation for that particular performance measure.

Safety Performance Results

The Safety Index provides a high-level assessment of safety performance for the corridor and for each segment. The four secondary measures provide more detailed information to assess safety performance.

Based on the results of this analysis, the following observations were made:

- The crash unit type performance measures for crashes involving trucks, motorcycles and non-motorized travelers had insufficient data to generate reliable performance ratings for the SR 260 | US 60 corridor
- Several segments had insufficient data to generate reliable performance ratings for crashes involving behaviors associated with the SHSP Top 5 Emphasis Areas
- A total of 67 fatal and incapacitating injury crashes occurred along the SR 260 | US 60 corridor in 2011-2015; of these crashes, 11 were fatal and 56 involved incapacitating injuries
- The weighted average of the Safety Index shows “above average” performance for the SR 260 | US 60 corridor compared to other segments statewide that have similar operating environments, meaning the corridor generally performs well as it relates to safety
- The Safety Index value for Segments 60-7 is “below average”, meaning this segments has more crashes than is typical statewide
- The Directional Safety Index value for three segments, usually in only one of the directions for the corridor, is “below average”
- The percentage of crashes related to the SHSP Top 5 Emphasis Areas is higher in Segments 260-3 and 60-7 than the statewide average for similar operating environments
- Safety hot spots include:
 - WB, MP 340-342

Table 8 summarizes the Safety performance results for the SR 260 | US 60 corridor. **Figure 14** illustrates the primary Safety Index performance and locations of Safety hot spots along the SR 260 | US 60 corridor. Maps for each secondary measure can be found in **Appendix A**.

Table 8: Safety Performance

Segment #	Segment Length (miles)	Total Fatal & Incapacitating Injury Crashes (F/I)	Safety Index	Directional Safety Index		% of Fatal + Incapacitating Injury Crashes Involving SHSP Top 5 Emphasis Areas Behaviors	% of Fatal + Incapacitating Injury Crashes Involving Trucks	% of Fatal + Incapacitating Injury Crashes Involving Motorcycles	% of Fatal + Incapacitating Injury Crashes Involving Non-Motorized Travelers
				EB	WB				
260-1 ^b	4	0/1	0.09	0.00	0.18	Insufficient Data	Insufficient Data	Insufficient Data	Insufficient Data
260-2 ^c	13	1/2	0.65	0.00	1.29	Insufficient Data	Insufficient Data	Insufficient Data	Insufficient Data
260-3 ^c	14	1/9	0.71	1.11	0.31	80%	Insufficient Data	Insufficient Data	Insufficient Data
260/60-4 ^b	8	0/4	0.80	0.75	0.84	19%	Insufficient Data	Insufficient Data	Insufficient Data
260-5 ^b	16	3/17	0.55	0.71	0.39	25%	Insufficient Data	Insufficient Data	Insufficient Data
60-6 ^c	7	0/4	0.23	0.34	0.11	Insufficient Data	Insufficient Data	Insufficient Data	Insufficient Data
60-7 ^a	32	4/10	1.40	2.13	0.67	64%	Insufficient Data	Insufficient Data	Insufficient Data
60-8 ^b	5	0/0	0.00	0.00	0.00	Insufficient Data	Insufficient Data	Insufficient Data	Insufficient Data
60-9 ^c	13	0/0	0.00	0.00	0.00	Insufficient Data	Insufficient Data	Insufficient Data	Insufficient Data
Weighted Corridor Average			0.72	0.92	0.51	32%	Insufficient Data	Insufficient Data	Insufficient Data
SCALES									
Performance Level			2 or 3 or 4 Lane Divided Highway						
Above Average			< 0.77			< 44%	< 4%	< 16%	< 2%
Average			0.77 – 1.23			44% - 54%	4% - 7%	16% - 26%	2% - 4%
Below Average			> 1.23			> 54%	> 7%	> 26%	> 4%
Performance Level			4 or 5 Lane Undivided Highway						
Above Average			< 0.80			< 42%	< 6%	< 6%	< 5%
Average			0.80 – 1.20			42% - 51%	6% - 10%	6% - 9%	5% - 8%
Below Average			> 1.20			> 51%	> 10%	> 9%	> 8%
Performance Level			2 or 3 Lane Undivided Highway						
Above Average			< 0.94			< 51%	< 6%	< 19%	< 5%
Average			0.94 – 1.06			51% - 58%	6% - 10%	19% - 27%	5% - 8%
Below Average			> 1.06			> 58%	> 10%	> 27%	> 8%

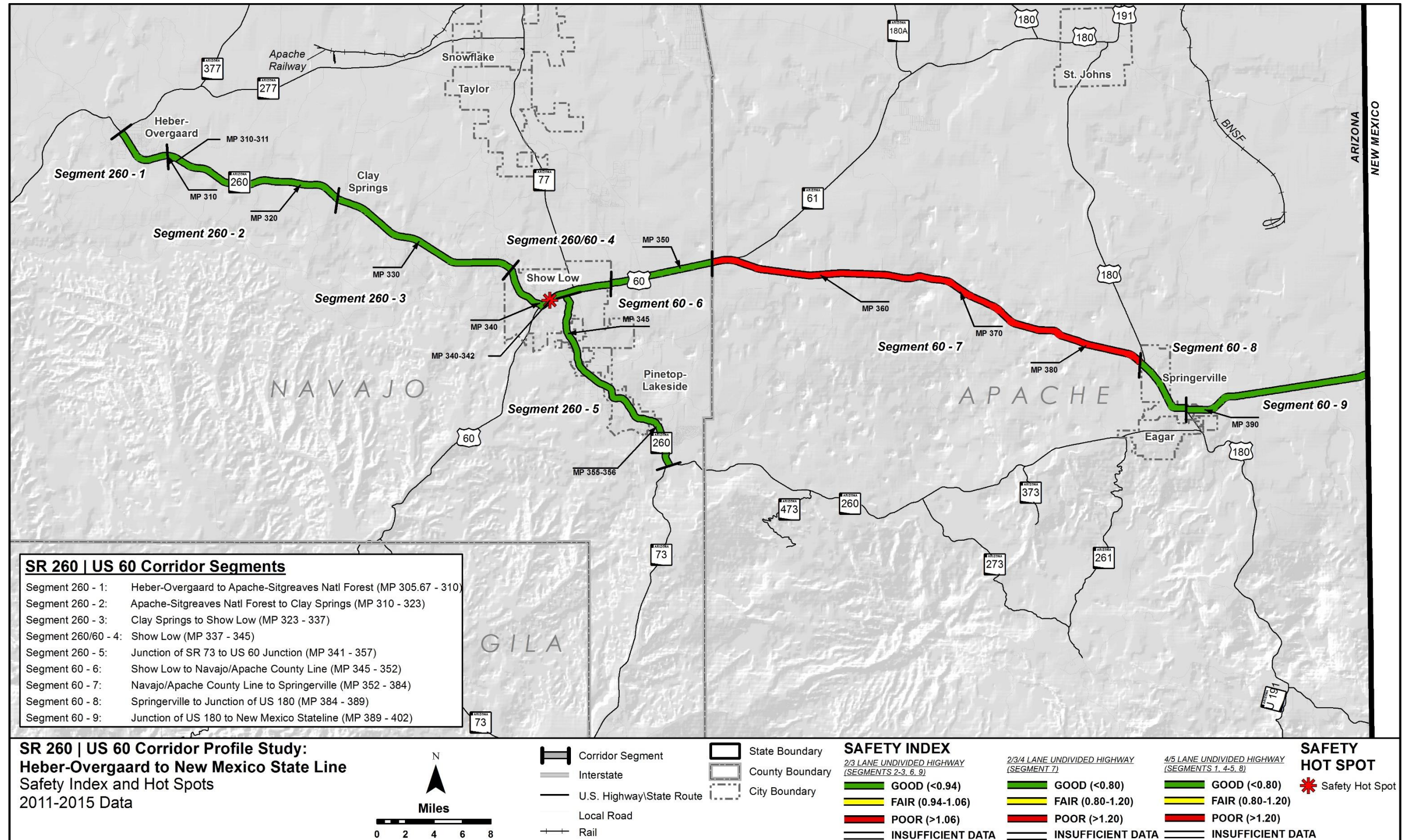
^a2 or 3 or 4 Lane Divided Highway

^b4 or 5 Lane Undivided Highway

^c2 or 3 Lane Undivided Highway

Note: "Insufficient Data" indicates there was not enough data available to generate reliable performance ratings.

Figure 14: Safety Performance



2.6 Freight Performance Area

The Freight performance area consists of a single primary measure (Freight Index) and five secondary measures, as illustrated in **Figure 15**. All measures related to the reliability of truck travel as measured by observed truck travel time speed and delays to truck travel from freeway closures or physical restrictions to truck travel. The detailed calculations and equations developed for each measure are available in **Appendix B** and the performance data for this corridor is contained in **Appendix C**.

Figure 15: Freight Performance Measures



Primary Freight Index

The Freight Index is a reliability performance measure based on the PTI for truck travel. The Truck Planning Time Index (TPTI) is the ratio of the 95th percentile truck travel time to the free-flow truck travel time. The TPTI reflects the extra buffer time needed for on-time delivery while accounting for non-recurring delay. Non-recurring delay refers to unexpected or abnormal delay due to closures or restrictions resulting from circumstances such as crashes, inclement weather, and construction activities.

Each corridor segment is rated on a scale with other segments in similar operating environments. Within the Freight performance area, the relevant operating environments are interrupted flow (e.g., signalized at-grade intersections are present) and uninterrupted flow (e.g., controlled access grade-separated conditions such as a freeway or interstate highway).

For the SR 260 | US 60 corridor, the following operating environments were identified:

- Interrupted Flow: Segments 260-4, 260-5, and 60-8
- Uninterrupted Flow: Segments 260-1, 260-2, 260-3, 60-6, 60-7, and 60-9

Secondary Freight Measures

The Freight performance area includes five secondary measures that provide an in-depth evaluation of the different characteristics of freight performance:

Recurring Delay (Directional Truck Travel Time Index [TTTI])

- The ratio of the average peak period truck travel time to the free-flow truck travel time (based on the posted speed limit up to a maximum of 65 miles per hour) in a given direction
- The TTTI recognizes the delay potential from recurring congestion during peak periods; different thresholds are applied to uninterrupted flow (freeways) and interrupted flow (non-freeways) to account for flow characteristics

Non-Recurring Delay (Directional TPTI)

- The ratio of the 95th percentile truck travel time to the free-flow truck travel time (based on the posted speed limit up to a maximum of 65 miles per hour) in a given direction
- The TPTI recognizes the delay potential from non-recurring delays such as traffic crashes, weather, or other incidents; different thresholds are applied to uninterrupted flow (freeways) and interrupted flow (non-freeways) to account for flow characteristics
- The TPTI indicates the amount of time in addition to the typical travel time that should be allocated to make an on-time trip 95% of the time in a given direction

Closure Duration

- The average time (in minutes) a particular milepost is closed per year per mile on a given segment of the corridor in a specific direction of travel; a weighted average is applied to each closure that takes into account the distance over which the closure occurs

Bridge Vertical Clearance

- The minimum vertical clearance (in feet) over the travel lanes for underpass structures on each segment

Bridge Vertical Clearance Hot Spots

- A Bridge vertical clearance “hot spot” exists where the underpass vertical clearance over the mainline travel lanes is less than 16.25 feet and no exit/entrance ramps exist to allow vehicles to bypass the low clearance location
- If a location with a vertical clearance less than 16.25 feet can be avoided by using immediately adjacent exit/entrance ramps rather than the mainline, it is not considered a hot spot

Freight Performance Results

The Freight Index provides a high-level assessment of freight mobility for the corridor and for each segment. The five secondary measures provide more detailed information to assess freight performance.

Based on the results of this analysis, the following observations were made:

- The weighted average of the Freight Index shows “poor” overall performance for the SR 260 | US 60 corridor
- Most segments show either “poor” or “fair” performance for directional TPTI measures, meaning the corridor has “poor” or “fair” travel time reliability in the EB and WB direction due to non-recurring congestion
- Most segments show either “poor” performance in the closure duration performance measure
- No bridge vertical clearance hot spots exist along the SR 260 | US 60 corridor

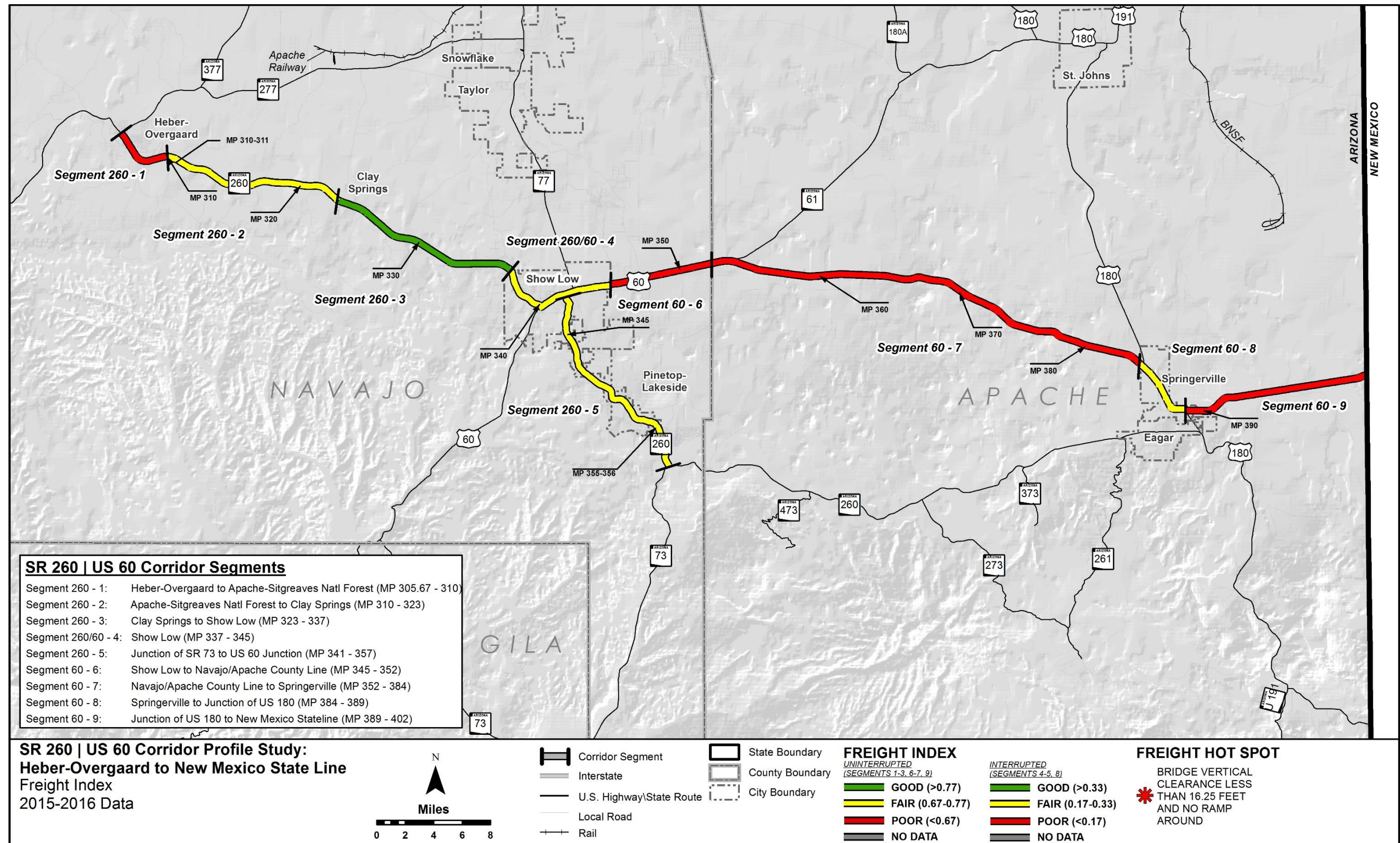
Table 9 summarizes the Freight performance results for the SR 260 | US 60 corridor. **Figure 16** illustrates the primary Freight Index performance and locations of freight hot spots along the SR 260 | US 60 corridor. Maps for each secondary measure can be found in **Appendix A**.

Table 9: Freight Performance

Segment #	Segment Length (miles)	Freight Index	Directional TTTI		Directional TPTI		Closure Duration (minutes/milepost/year/mile)		Bridge Vertical Clearance (feet)
			EB	WB	EB	WB	EB	WB	
260-1 ^{2^}	4	0.47	1.10	1.12	1.94	2.30	26.32	2969.40	No UP
260-2 ^{2^}	13	0.75	1.10	1.08	1.32	1.33	0.00	2154.82	No UP
260-3 ^{2^}	14	0.78	1.10	1.08	1.23	1.62	1226.19	2140.04	No UP
260 60-4 ^{2*}	8	0.21	1.23	1.32	4.67	4.77	1924.09	1001.99	No UP
260-5 ^{2*}	16	0.20	1.30	1.31	5.72	4.48	6.30	2651.60	No UP
60-6 ^{2^}	7	0.20	1.37	1.38	4.94	4.85	3058.62	37.36	No UP
60-7 ^{2^}	32	0.48	1.15	1.09	2.45	1.75	5578.00	61.47	No UP
60-8 ^{2*}	5	0.26	1.21	1.27	4.36	3.41	4383.71	290.20	No UP
60-9 ^{2^}	13	0.58	1.13	1.10	1.81	1.64	4081.11	267.88	No UP
Weighted Corridor Average		0.47	1.18	1.16	2.94	2.56	2738.83	1143.36	0.0
SCALES									
Performance Level		Uninterrupted Interrupted				All			
Good		> 0.77 [^] > 0.33 [*]	< 1.15 [^] < 1.30 [*]		< 1.30 [^] < 3.00 [*]		< 44.18		> 16.5
Fair		0.67 - 0.77 [^] 0.17 - 0.33 [*]	1.15 - 1.33 [^] 1.30 - 2.00 [*]		1.30 - 1.50 [^] 3.00-6.00 [*]		44.18 - 124.86		16.0 - 16.5
Poor		< 0.67 [^] < 0.17 [*]	> 1.33 [^] > 2.00 [*]		> 1.50 [^] > 6.00 [*]		> 124.86		< 16.0

¹Urban Operating Environment
²Rural Operating Environment
[^]Uninterrupted Flow Facility
^{*}Interrupted Flow Facility

Figure 16: Freight Performance



2.7 Corridor Performance Summary

Based on the results presented in the preceding sections, the following general observations were made related to the performance of the SR 260 | US 60 corridor:

- The weighted average of the Pavement Index shows “fair” overall performance for the SR 260 | US 60 corridor
- The weighted average of the Bridge Index shows “fair” overall performance for the SR 260 | US 60 corridor
- The weighted average of the Mobility Index shows “good” overall performance for the SR 260 | US 60 corridor
- The weighted average of the Safety Index shows “above average” overall performance for the SR 260 | US 60 corridor
- The weighted average of the Freight Index shows “poor” overall performance for the SR 260 | US 60 corridor
- The lowest performance along the SR 260 | US 60 corridor generally occurs in the Safety and Freight performance areas with the Mobility performance area showing the highest performance

Figure 17 shows the percentage of the SR 260 | US 60 corridor that rates either “good/above average” performance, “fair/average” performance, or “poor/below average” performance for each primary measure. On the SR 260 | US 60 corridor, Freight is the lowest performing area with 50% of the corridor in “poor” condition as it relates to the primary measure. Mobility is the highest performing area along the SR 260 | US 60 corridor with 79% of the corridor in “good” condition as it relates to the primary measure.

Table 10 shows a summary of corridor performance for all primary measures and secondary measure indicators for the SR 260 | US 60 corridor. A weighted corridor average rating (based on the length of the segment) was calculated for each primary and secondary measure. The weighted average ratings are summarized in **Figure 18** which also provides a brief description of each performance measure. **Figure 18** represents the average for the entire corridor and any given segment or location could have a higher or lower rating than the corridor average.

Figure 17: Performance Summary by Primary Measure

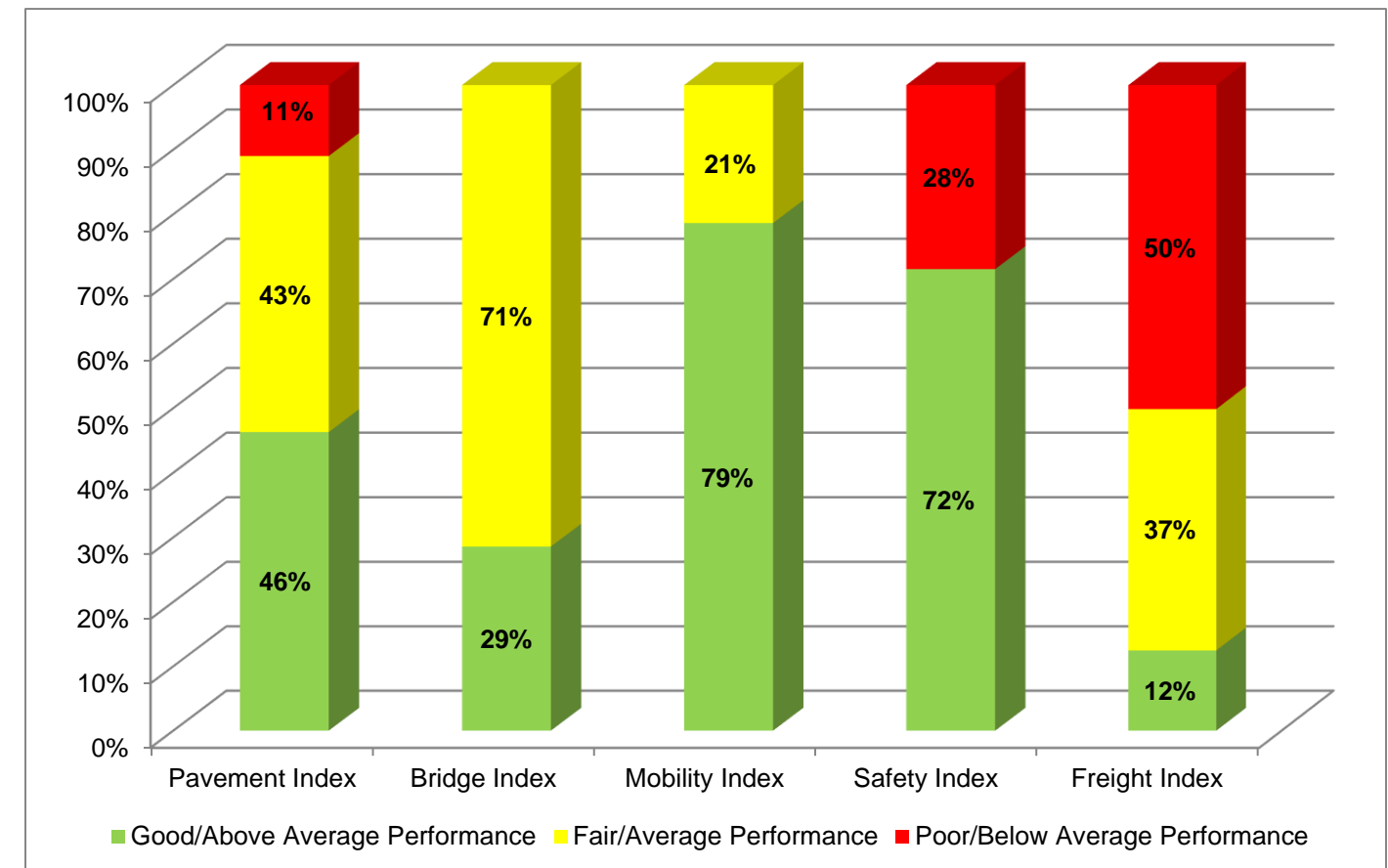


Figure 18: Corridor Performance Summary by Performance Measure

Pavement	Bridge	Mobility	Safety	Freight
Pavement Index (PI): based on two pavement condition ratings from the ADOT Pavement Database; the two ratings are the International Roughness Index (IRI) and the Cracking Rating	Bridge Index (BI): based on four bridge condition ratings from the ADOT Bridge Database; the four ratings are the Deck Rating, Substructure Rating, Superstructure Rating, and Structural Evaluation Rating	Mobility Index (MI): an average of the existing daily volume-to-capacity (V/C) ratio and the projected 2035 daily V/C ratio	Safety Index (SI): combines the bi-directional frequency and rate of fatal and incapacitating injury crashes, compared to crash occurrences on similar roadways in Arizona	Freight Index (FI): a reliability performance measure based on the bi-directional planning time index for truck travel
<ul style="list-style-type: none"> ➤ Directional Pavement Serviceability Rating (PSR) – the weighted average (based on number of lanes) of the PSR for the pavement in each direction of travel ➤ % Area Failure – the percentage of pavement area rated above failure thresholds for IRI or Cracking 	<ul style="list-style-type: none"> ➤ Sufficiency Rating– multipart rating includes structural adequacy and safety factors as well as functional aspects such as traffic volume and length of detour ➤ % of Deck Area on Functionally Obsolete Bridges– the percentage of deck area in a segment that is on functionally obsolete bridges; identifies bridges that no longer meet standards for current traffic volumes, lane width, shoulder width, or bridge rails; a bridge that is functionally obsolete may still be structurally sound ➤ Lowest Bridge Rating –the lowest rating of the four bridge condition ratings on each segment 	<ul style="list-style-type: none"> ➤ Future Daily V/C – the future 2035 V/C ratio provides a measure of future congestion if no capacity improvements are made to the corridor ➤ Existing Peak Hour V/C – the existing peak hour V/C ratio for each direction of travel provides a measure of existing peak hour congestion during typical weekdays ➤ Closure Extent – the average number of instances a particular milepost is closed per year per mile on a given segment of the corridor in a specific direction of travel ➤ Directional Travel Time Index (TTI) – the ratio of the average peak period travel time to the free-flow travel time; the TTI represents recurring delay along the corridor ➤ Directional Planning Time Index (PTI) – the ratio of the 95th percentile travel time to the free-flow travel time; the PTI represents non-recurring delay along the corridor ➤ % Bicycle Accommodation – the percentage of a segment that accommodates bicycle travel ➤ % Non-single Occupancy Vehicle (Non-SOV) Trips –the percentage of trips that are taken by vehicles carrying more than one occupant 	<ul style="list-style-type: none"> ➤ Directional Safety Index – the combination of the directional frequency and rate of fatal and incapacitating injury crashes, compared to crash occurrences on similar roadways in Arizona ➤ % of Fatal + Incapacitating Injury Crashes Involving SHSP Top 5 Emphasis Areas Behaviors – the percentage of fatal and incapacitating crashes that involve at least one of the five Strategic Highway Safety Plan (SHSP) emphasis areas on a given segment compared to the statewide average percentage on roads with similar operating environments ➤ % of Fatal + Incapacitating Crashes Involving SHSP Crash Unit Types – the percentage of total fatal and incapacitating injury crashes that involves a given crash unit type (motorcycle, truck, non-motorized traveler) compared to the statewide average percentage on roads with similar operating environments 	<ul style="list-style-type: none"> ➤ Directional Truck Travel Time Index (TTTI) – the ratio of the average peak period truck travel time to the free-flow truck travel time; the TTTI represents recurring delay along the corridor ➤ Directional Truck Planning Time Index (TPTI) – the ratio the 95th percentile truck travel time to the free-flow truck travel time; the TPTI represents non-recurring delay along the corridor ➤ Closure Duration – the average time a particular milepost is closed per year per mile on a given segment of the corridor in a specific direction of travel ➤ Bridge Vertical Clearance – the minimum vertical clearance over the travel lanes for underpass structures on each segment.

Table 10: Corridor Performance Summary by Segment and Performance Measure

Segment #	Segment Length (miles)	Pavement Performance Area			Bridge Performance Area				Mobility Performance Area												
		Pavement Index	Directional PSR		% Area Failure	Bridge Index	Sufficiency Rating	% of Deck Area on Functionally Obsolete Bridges	Lowest Bridge Rating	Mobility Index	Future Daily V/C	Existing Peak Hour V/C		Closure Extent (instances/ milepost/year/mile)		Directional TTI (all vehicles)		Directional PTI (all vehicles)		% Bicycle Accommodation	% Non-Single Occupancy Vehicle (SOV) Trips
			EB	WB								EB	WB	EB	WB	EB	WB	EB	WB		
260-1 ² ^b	4	1.89	3.41		60.0%	No Bridges				0.10	0.09	0.08	0.08	0.16	1.84	1.01	1.00	1.75	1.84	93%	16.8%
260-2 ² ^c	13	3.87	4.04		7.7%	6.00	94.10	0.0%	6	0.29	0.29	0.33	0.33	0.00	1.45	1.07	1.02	1.36	1.43	0%	13.9%
260-3 ² ^c	14	4.02	3.76		0.0%	6.00	92.80	0.0%	6	0.18	0.19	0.22	0.24	0.51	1.46	1.07	1.05	1.26	1.52	5%	17.3%
260/60-4 ² *b	8	2.86	3.16		25.0%	7.00	85.00	0.0%	7	0.70	0.84	0.55	0.54	1.16	0.79	1.16	1.18	3.45	5.14	54%	17.9%
260-5 ² *b	16	3.51	3.85	3.73	21.9%	No Bridges				0.75	0.90	0.62	0.62	0.05	1.41	1.12	1.10	2.60	3.57	50%	16.4%
60-6 ² ^c	7	3.71	3.66		0.0%	6.00	82.20	0.0%	6	0.46	0.52	0.30	0.28	1.95	0.15	1.19	1.21	2.07	3.52	0%	12.2%
60-7 ² ^a	32	3.19	3.53		21.9%	7.00	96.30	0.0%	7	0.24	0.25	0.20	0.21	3.30	0.08	1.09	1.04	2.02	1.49	5%	13.8%
60-8 ² *b	5	3.73	3.65		0.0%	6.00	81.10	0.0%	6	0.26	0.30	0.26	0.28	2.46	0.20	1.17	1.19	4.11	8.55	98%	16.9%
60-9 ² ^c	13	4.25	3.93		0.0%	No Bridges				0.04	0.04	0.04	0.04	2.27	0.18	1.16	1.05	2.25	2.77	100%	0.0%
Weighted Corridor Average		3.47	3.69	3.57	14%	6.29	89.37	0%	6.29	0.33	0.37	0.29	0.29	1.59	0.74	1.11	1.07	2.15	2.65	33%	13%
SCALES																					
Performance Level		Non-Interstate			All				Urban and Fringe Urban				All		Uninterrupted				All		
Good/Above Average		> 3.50			< 5%	> 6.5	> 80	< 12%	> 6	< 0.71				< 0.22		< 1.15		< 1.3		> 90%	> 17%
Fair/Average		2.90 - 3.50			5% - 20%	5.0 - 6.5	50 - 80	12% - 40%	5 - 6	0.71 - 0.89				0.22 - 0.62		1.15 - 1.33		1.3 - 1.5		60% - 90%	11% - 17%
Poor/Below Average		< 2.90			> 20%	< 5.0	< 50	> 40%	< 5	> 0.89				> .62		> 1.33		> 1.5		< 60%	< 11%
Performance Level										Rural						Interrupted					
Good/Above Average										< 0.56						< 1.3		< 3.0			
Fair/Average										0.56 - 0.76						1.3 – 2.0		3.0 – 6.0			
Poor/Below Average										> 0.76						> 2.0		> 6.0			

[^]Uninterrupted Flow Facility
^{*}Interrupted Flow Facility

^a2 or 3 or 4 Lane Divided Highway
^b4 or 5 Lane Undivided Highway

^c2 or 3 Lane Undivided Highway

¹Urban Operating Environment
²Rural Operating Environment

Table 10: Corridor Performance Summary by Segment and Performance Measure (continued)

Segment #	Segment Length (miles)	Safety Performance Area								Freight Performance Area							
		Safety Index	Directional Safety Index		% of Fatal + Incapacitating Injury Crashes Involving SHSP Top 5 Emphasis Areas Behaviors	% of Fatal + Incapacitating Injury Crashes Involving Trucks	% of Fatal + Incapacitating Injury Crashes Involving Motorcycles	% of Fatal + Incapacitating Injury Crashes Involving Non-Motorized Travelers	Freight Index	Directional TTTI		Directional TPTI		Closure Duration (minutes/milepost/year/mile)		Bridge Vertical Clearance (feet)	
			EB	WB						EB	WB	EB	WB	EB	WB		
260-1 ^{2^Ab}	4	0.09	0.00	0.18	Insufficient Data	Insufficient Data	Insufficient Data	Insufficient Data	0.47	1.10	1.12	1.94	2.30	26.32	2969.40	No UP	
260-2 ^{2^Ac}	13	0.65	0.00	1.29	Insufficient Data	Insufficient Data	Insufficient Data	Insufficient Data	0.75	1.10	1.08	1.32	1.33	0.00	2154.82	No UP	
260-3 ^{2^Ac}	14	0.71	1.11	0.31	80%	Insufficient Data	Insufficient Data	Insufficient Data	0.78	1.10	1.08	1.23	1.62	1226.19	2140.04	No UP	
260/60-4 ^{2*b}	8	0.80	0.75	0.84	19%	Insufficient Data	Insufficient Data	Insufficient Data	0.21	1.23	1.32	4.67	4.77	1924.09	1001.99	No UP	
260-5 ^{2*b}	16	0.55	0.71	0.39	25%	Insufficient Data	Insufficient Data	Insufficient Data	0.20	1.30	1.31	5.72	4.48	6.30	2651.60	No UP	
60-6 ^{2^c}	7	0.23	0.34	0.11	Insufficient Data	Insufficient Data	Insufficient Data	Insufficient Data	0.20	1.37	1.38	4.94	4.85	3058.62	37.36	No UP	
60-7 ^{2^Aa}	32	1.40	2.13	0.67	64%	Insufficient Data	Insufficient Data	Insufficient Data	0.48	1.15	1.09	2.45	1.75	5578.00	61.47	No UP	
60-8 ^{2*b}	5	0.00	0.00	0.00	Insufficient Data	Insufficient Data	Insufficient Data	Insufficient Data	0.26	1.21	1.27	4.36	3.41	4383.71	290.20	No UP	
60-9 ^{2^Ac}	13	0.00	0.00	0.00	Insufficient Data	Insufficient Data	Insufficient Data	Insufficient Data	0.58	1.13	1.10	1.81	1.64	4081.11	267.88	No UP	
Weighted Corridor Average		0.72	0.92	0.51	33%	Insufficient Data	Insufficient Data	Insufficient Data	0.47	1.18	1.16	2.94	2.56	2738.83	1143.36	0.00	
SCALES																	
Performance Level		2 or 3 or 4 Lane Divided Highway							Uninterrupted				All				
Good/Above Average		< 0.77			< 44%	< 4%	< 16%	< 2%	> 0.77	< 1.15		< 1.3		< 44.18		> 16.5	
Fair/Average		0.77 - 1.23			44% - 54%	4% - 7%	16% - 26%	2% - 4%	0.67 - 0.77	1.15 - 1.33		1.3 - 1.5		44.18-124.86		16.0 - 16.5	
Poor/Below Average		> 1.23			> 54%	> 7%	> 26%	> 4%	< 0.67	> 1.33		> 1.5		> 124.86		< 16.0	
Performance Level		2 or 3 Lane Undivided Highway							Interrupted								
Good/Above Average		< 0.94			< 51%	< 6%	< 19%	< 5%	> 0.33	< 1.3		< 3.0					
Fair/Average		0.94 - 1.06			51% - 58%	6% - 10%	19% - 27%	5% - 8%	0.17 - 0.33	1.3 - 2.0		3.0 - 6.0					
Poor/Below Average		> 1.06			> 58%	> 10%	> 27%	> 8%	< 0.17	> 2.0		> 6.0					
Performance Level		4 or 5 Undivided Highway															
Good/Above Average		< 0.80			< 42%	< 6%	< 6%	< 5%									
Fair/Average		0.80 - 1.20			42% - 51%	6% - 10%	6% - 9%	5% - 8%									
Poor/Below Average		> 1.20			> 51%	> 10%	> 9%	> 8%									

^aUninterrupted Flow Facility
^{*}Interrupted Flow Facility

^a2 or 3 or 4 Lane Divided Highway
^b4 or 5 Lane Undivided Highway

^c2 or 3 Lane Undivided Highway

¹Urban Operating Environment
²Rural Operating Environment

Notes: “Insufficient Data” indicates there was not enough data available to generate reliable performance ratings
“No UP” indicates no underpasses are present in the segment

3.0 NEEDS ASSESSMENT

3.1 Corridor Objectives

Statewide goals and performance measures were established by the ADOT Long-Range Transportation Plan (LRTP), 2010-2035. Statewide performance goals that are relevant to SR 260 | US 60 performance areas were identified and corridor goals were then formulated for each of the five performance areas that aligned with the overall statewide goals established by the LRTP. Based on stakeholder input, corridor goals, corridor objectives, and performance results, three “emphasis areas” were identified for the SR 260 | US 60 corridor: Pavement, Safety, and Freight.

Considering the corridor goals and identified emphasis areas, performance objectives were developed for each quantifiable performance measure that identify the desired level of performance based on the performance scale levels for the overall corridor and for each segment of the corridor. For the performance emphasis areas, the corridor-wide weighted average performance objectives are identified with a higher standard than for the other performance areas. **Table 11** shows the SR 260 | US 60 corridor goals, corridor objectives, and performance objectives, and how they align with the statewide goals.

It is not reasonable within a financially constrained environment to expect that every performance measure will always be at the highest levels on every corridor segment. Therefore, individual corridor segment objectives have been set as “fair/average” or better and should not fall below that standard.

Achieving corridor and segment performance objectives will help ensure that investments are targeted toward improvements that support the safe and efficient movement of travelers on the corridor. Addressing current and future congestion, thereby improving mobility on congested segments, will also help the corridor fulfill its potential as a significant contributor to the region’s economy.

Corridor performance is measured against corridor and segment objectives to determine needs – the gap between observed performance and performance objectives.

Goal achievement will improve or reduce current and future congestion, increase travel time reliability, and reduce fatalities and incapacitating injuries resulting from vehicle crashes. Where performance is currently rated “good”, the goal is always to maintain that standard, regardless of whether or not the performance is in an emphasis area.

Table 11: Corridor Performance Goals and Objectives

ADOT Statewide LRTP Goals	SR 260 US 60 Corridor Goals	SR 260 US 60 Corridor Objectives	Performance Area	Primary Measure	Performance Objective	
				Secondary Measure Indicators	Corridor Average	Segment
Improve Mobility, Reliability, and Accessibility Make Cost Effective Investment Decisions and Support Economic Vitality	Provide a safe, reliable, and efficient connection for the communities along the corridor Provide a safe and reliable route for recreational and tourist travel Consider future land use when recommending infrastructure improvements with potential for rural areas to development	Reduce current and future congestion and delay in the urbanized areas Improve access management and provide guidance for future connections within the corridor Reduce delays from non-recurring events and incidents to improve reliability Improve bicycle and pedestrian accommodations Utilize technology to optimize existing system capacity and performance	Mobility	Mobility Index	Fair or better	Fair or better
				Future Daily V/C		
				Existing Peak Hour V/C		
				Closure Extent		
				Directional Travel Time Index		
				Directional Planning Time Index		
				% Bicycle Accommodation		
				% Non-SOV Trips		
	Provide a safe, reliable and efficient freight route through the region	Reduce delays and restrictions to freight movement to improve reliability Improve travel time reliability (including impacts to motorists due to freight traffic)	Freight <i>(Emphasis Area)</i>	Freight Index	Good	Fair or better
				Directional Truck Travel Time Index		
				Directional Truck Planning Time Index		
				Closure Duration		
				Bridge Vertical Clearance		
Preserve and Maintain the System	Preserve and modernize highway infrastructure	Maintain structural integrity of bridges	Bridge	Bridge Index	Fair or better	Fair or better
				Sufficiency Rating		
				% of Deck Area on Functionally Obsolete Bridges		
				Lowest Bridge Rating		
		Improve pavement ride quality for all corridor users Reduce long-term pavement maintenance costs	Pavement <i>(Emphasis Area)</i>	Pavement Index	Good	Fair or better
				Directional Pavement Serviceability Rating		
				% Area Failure		
Enhance Safety	Provide a safe, reliable, and efficient connection for the communities along the corridor Promote safety by implementing appropriate countermeasures	Reduce fatal and incapacitating injury crashes for all roadway users Reduce wildlife-related crashes	Safety <i>(Emphasis Area)</i>	Safety Index	Above Average	Average or better
				Directional Safety Index		
				% of Crashes Involving SHSP Top 5 Emphasis Areas Behaviors		
				% of Crashes Involving Crash Unit Types		

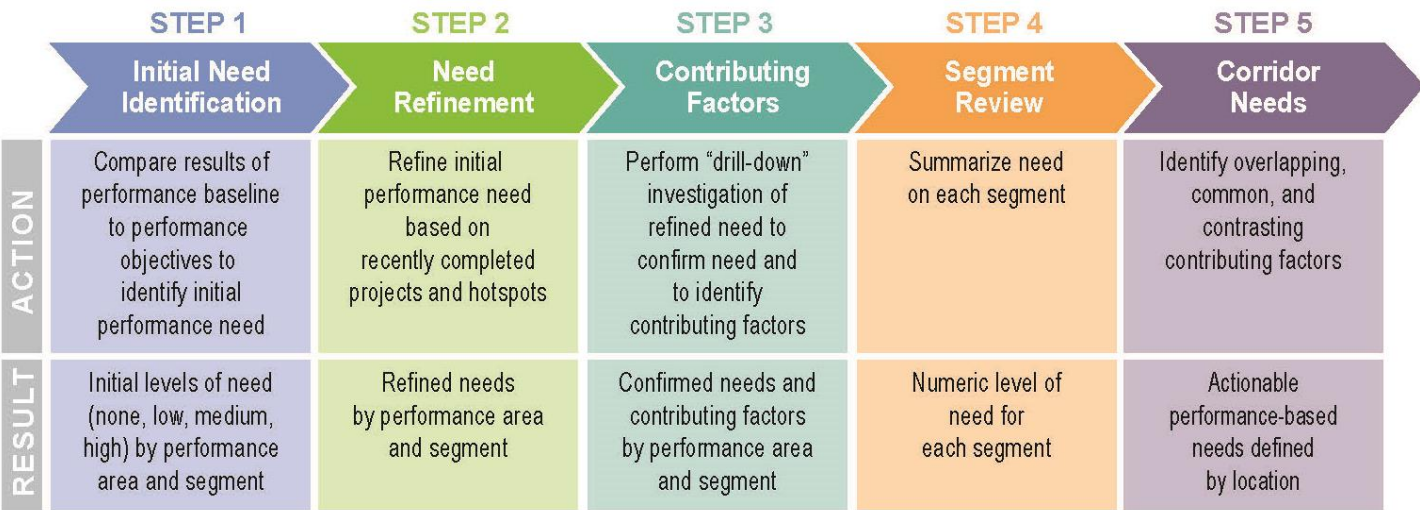
3.2 Needs Assessment Process

The following guiding principles were used as an initial step in developing a framework for the performance-based needs assessment process:

- Corridor needs are defined as the difference between the corridor performance and the performance objectives
- The needs assessment process should be systematic, progressive, and repeatable, but also allow for engineering judgment where needed
- The process should consider all primary and secondary performance measures developed for the study
- The process should develop multiple need levels including programmatic needs for the entire length of the corridor, performance area-specific needs, segment-specific needs, and location-specific needs (defined by MP limits)
- The process should produce actionable needs that can be addressed through strategic investments in corridor preservation, modernization, and expansion

The performance-based needs assessment process is illustrated in **Figure 19** and described in the following sections.

Figure 19: Needs Assessment Process



Step 1: Initial Needs Identification

The first step in the needs assessment process links baseline (existing) corridor performance with performance objectives. In this step, the baseline corridor performance is compared to the performance objectives to provide a starting point for the identification of performance needs. This mathematical comparison results in an initial need rating of None, Low, Medium, or High for each primary and secondary performance measure. An illustrative example of this process is shown below in **Figure 20**.

Figure 20: Initial Need Ratings in Relation to Baseline Performance (Bridge Example)

Performance Thresholds	Performance Level	Initial Level of Need	Description
6.5	Good	None*	All levels of Good and top 1/3 of Fair (>6.0)
	Good		
	Good		
5.0	Fair	Low	Middle 1/3 of Fair (5.5-6.0)
	Fair		
	Fair	Medium	Lower 1/3 of Fair and top 1/3 of Poor (4.5-5.5)
	Poor		
	Poor	High	Lower 2/3 of Poor (<4.5)
	Poor		

**A segment need rating of 'None' does not indicate a lack of needed improvements; rather, it indicates that the segment performance score exceeds the established performance thresholds and strategic solutions for that segment will not be developed as part of this study.*

The initial level of need for each segment is refined to account for hot spots and recently completed or under construction projects, resulting in a final level of need for each segment. The final levels of need for each primary and secondary performance measure are combined to produce a weighted final need rating for each segment. Values of 0, 1, 2, and 3 are assigned to the initial need levels of None, Low, Medium, and High, respectively. A weight of 1.0 is applied to the Performance Index need and equal weights of 0.20 are applied to each need for each secondary performance measure. For directional secondary performance measures, each direction of travel receives a weight of 0.10.

Step 2: Need Refinement

In Step 2, the initial level of need for each segment is refined using the following information and engineering judgment:

- For segments with an initial need of None that contain hot spots, the level of need should be increased from None to Low
- For segments with an initial level of need where recently completed projects or projects under construction are anticipated to partially or fully address the identified need, the level of need should be reduced or eliminated as appropriate
- Programmed projects that are expected to partially or fully address an identified need are not justification to lower the initial need because the programmed projects may not be implemented as planned; in addition, further investigations may suggest that changes in the scope of a programmed project may be warranted

The resulting final needs are carried forward for further evaluation in Step 3.

Step 3: Contributing Factors

In Step 3, a more detailed review of the condition and performance data available from ADOT is conducted to identify contributing factors to the need. Typically, the same databases used to develop the baseline performance serve as the principal sources for the more detailed analysis.

However, other supplemental databases may also be useful sources of information. The databases used for diagnostic analysis are listed below:

Pavement Performance Area

- Pavement Rating Database

Bridge Performance Area

- ABISS

Mobility Performance Area

- Highway Performance Monitoring System (HPMS) Database
- AZTDM
- Real-time traffic conditions data produced by American Digital Cartography Inc. (HERE) Database
- Highway Conditions Reporting System (HCRS) Database

Safety Performance Area

- Crash Database

Freight Performance Area

- HERE Database
- HCRS Database

In addition, other sources considered helpful in identifying contributing factors are:

- Maintenance history (from ADOT PeCoS database for pavement), the level of past investments, or trends in historical data that provide context for pavement and bridge history
- Field observations from ADOT district personnel can be used to provide additional information regarding a need that has been identified
- Previous studies can provide additional information regarding a need that has been identified

Step 3 results in the identification of performance-based needs and contributing factors by segment (and MP locations, if appropriate) that can be addressed through investments in preservation, modernization, and expansion projects to improve corridor performance. See **Appendix D** for more information.

Step 4: Segment Review

In this step, the needs identified in Step 2 and refined in Step 3 are quantified for each segment to numerically estimate the level of need for each segment. Values of 0 to 3 are assigned to the final need levels (from Step 3) of None, Low, Medium, and High, respectively. A weighting factor is applied to the performance areas identified as emphasis areas and a weighted average need is calculated for each segment. The resulting average need score can be used to compare levels of need between segments within a corridor and between segments in different corridors.

Step 5: Corridor Needs

In this step, the needs and contributing factors for each performance area are reviewed on a segment-by-segment basis to identify actionable needs and to facilitate the formation of solution sets that address multiple performance areas and contributing factors. The intent of this process is to identify overlapping, common, and contrasting needs to help develop strategic solutions. This step results in the identification of corridor needs by specific location.

3.3 Corridor Needs Assessment

This section documents the results of the needs assessment process described in the prior section. The needs in each performance area were classified as either None, Low, Medium, or High based on how well each segment performed in the existing performance analysis. The needs for each segment were numerically combined to estimate the average level of need for each segment of the corridor.

The final needs assessments for each performance measure, along with the scales used in analysis, are shown in **Table 12** through **Table 16**.

Pavement Needs Refinement and Contributing Factors

- Recently completed projects in the corridor did not result in an adjustment to level of need
- A hot spot in Segment 260-2 resulted in need being adjusted from None to Low
- See **Appendix D** for detailed information on contributing factors

Table 12: Final Pavement Needs

Segment #	Performance Score and Level of Need				Initial Segment Need	Hot Spots	Recently Completed Projects	Final Segment Need
	Pavement Index	Directional PSR		% Area Failure				
		NB	SB					
260-1	1.89	3.41	3.41	60%	3.60	MP 307-310	None	High
260-2	3.87	4.04	4.04	8%	0.00	MP 310-311	None	Low
260-3	4.02	3.76	3.76	0%	0.00	0	None	None
260 60-4	2.86	3.16	3.16	25%	2.80	MP 342-344	FY16 H8762: Pavement preservation on US 60. Only SR 260/US60 intersection to MP 342.57 applies to project (MP 335.80-342.57) FY17 H5107: Roadway widening, US 60 EB from SR 77 intersection (MP 342-343.5)	High
260-5	3.15	3.85	3.73	22%	1.40	MP 342-343 MP 344-345 MP 351-352 MP 354-355	FY16 H8378: Constructed asphaltic concrete pathway, concrete scupper, sidewalk ramps and other miscellaneous work (MP 350.67-351.20)	Low
60-6	3.71	3.66	3.66	0%	0.00	0	None	None
60-7	3.19	3.53	3.53	22%	1.40	MP 353-354 MP 357-358 MP 359-360 MP 361-362 MP 366-367 MP 375-377	None	Low
60-8	3.73	3.65	3.65	0%	0.00	0	None	None
60-9	4.25	3.93	3.93	0%	0.00	0	None	None
Level of Need (Score)	Performance Score Need Scale				Segment Level Need Scale	*A segment need rating of 'None' does not indicate a lack of needed improvements; rather, it indicates that the segment performance score exceeds the established performance thresholds and strategic solutions for that segment will not be developed as part of this study.		
None* (0)	> 3.30			< 10%	0			
Low (1)	3.10 - 3.30			10% - 15%	< 1.5			
Medium (2)	2.70 - 3.10			15% - 25%	1.5 - 2.5			
High (3)	< 2.70			> 25%	> 2.5			

Bridge Needs Refinement and Contributing Factors

- There are no bridges along the corridor with potential historical investment issues
- There were no recently completed bridge projects or hot spots along the corridor
- See **Appendix D** for detailed information on contributing factors

Table 13: Final Bridge Needs

Segment #	Performance Score and Level of Need				Initial Segment Need	Hot Spots	Recently Completed Projects	Final Segment Need
	Bridge Index	Sufficiency Rating	% of Deck on Functionally Obsolete Bridges	Lowest Bridge Rating				
260-1	No Bridges				None	None	None	None
260-2	6.00	94.10	None	None	0.0	None	None	None
260-3	6.00	92.80	None	None	0.0	None	None	None
260 60-4	7.00	85.00	None	None	0.0	None	None	None
260-5	No Bridges				None	None	None	None
60-6	6.00	82.20	None	None	0.0	None	None	None
60-7	7.00	96.30	None	None	0.0	None	None	None
60-8	6.00	81.10	None	None	0.0	None	None	None
60-9	No Bridges				None	None	None	None
Level of Need (Score)	Performance Score Need Scale				Segment Level Need Scale	<i>*A segment need rating of 'None' does not indicate a lack of needed improvements; rather, it indicates that the segment performance score exceeds the established performance thresholds and strategic solutions for that segment will not be developed as part of this study.</i>		
None (0)	> 6.0	> 70	> 5.0	< 21.0%	0			
Low (1)	5.5 - 6.0	60 - 70	5.0	21.0% - 31.0%	< 1.5			
Medium (2)	4.5 - 5.5	40 - 60	4.0	31.0% - 49.0%	1.5 - 2.5			
High (3)	< 4.5	< 40	< 4.0	> 49.0%	> 2.5			

Mobility Needs Refinement and Contributing Factors

- Recently completed projects resulted in need adjustment for Segments 260|60-4 and 260-5
- See **Appendix D** for detailed information on contributing factors

Table 14: Final Mobility Needs

Segment	Performance Score and Level of Need											Initial Segment Need	Recently Completed Projects	Final Segment Need	
	Mobility Index	Future Daily V/C	Existing Peak Hour V/C		Closure Extent		Directional TTI		Directional PTI		% Bicycle Accommodation				
			EB	WB	EB	WB	EB	WB	EB	WB					
260-1	0.10	0.09	0.12	0.12	0.16	1.84	1.01	1.00	2.77	1.84	93%	0.9	None	Low	
260-2	0.29	0.29	0.31	0.31	0.00	1.45	1.07	1.02	1.36	1.43	0%	1.0	None	Low	
260-3	0.18	0.19	0.22	0.24	0.51	1.46	1.07	1.05	1.26	1.52	5%	1.3	FY16 H8256: Cheney Ranch Loop - Bison Ridge Trail shoulder widening and guardrail replacement (MP 334.46-337.48)	Low	
260 60-4	0.70	0.84	0.67	0.62	1.16	0.79	1.16	1.18	3.45	5.14	54%	3.9	FY16 H8256: Cheney Ranch Loop - Bison Ridge Trail shoulder widening and guardrail replacement (MP 334.46-337.48) FY17 H5107: Roadway widening, US 60 EB from SR 77 intersection (MP 342-343.5)	Medium	
260-5	0.75	0.90	0.75	0.73	0.05	1.41	1.12	1.10	2.60	3.57	50%	3.7	FY16 H8378: Constructed asphaltic concrete pathway, concrete scupper, sidewalk ramps and other miscellaneous work (MP 350.67-351.20)	Medium	
60-6	0.46	0.52	0.31	0.29	1.95	0.15	1.19	1.21	2.07	3.52	0%	1.5	None	Medium	
60-7	0.24	0.25	0.20	0.20	3.30	0.08	1.09	1.04	2.02	1.49	5%	1.4	None	Low	
60-8	0.26	0.30	0.21	0.30	2.46	0.20	1.17	1.19	4.11	8.55	98%	0.7	None	Low	
60-9	0.04	0.04	0.04	0.04	2.27	0.18	1.16	1.05	2.25	2.77	100%	0.9	None	Low	
Level of Need (Score)	Performance Score Need Scale											Segment Level Need Scale	a: Uninterrupted Flow b: Interrupted Flow <i>*A segment need rating of 'None' does not indicate a lack of needed improvements; rather, it indicates that the segment performance score exceeds the established performance thresholds and strategic solutions for that segment will not be developed as part of this study.</i>		
None* (0)	≤ 0.77 (Urban) ≤ 0.63 (Rural)				< 0.35		< 1.21 ^a < 1.53 ^b		< 1.37 ^a < 4.00 ^b		> 80%				0
Low (1)	0.77 - 0.83 (Urban) 0.63 - 0.69 (Rural)				0.35 - 0.49		1.21 - 1.27 ^a 1.53 - 1.77 ^b		1.37 - 1.43 ^a 4.00 - 5.00 ^b		70% - 80%				< 1.5
Medium (2)	0.83 - 0.95 (Urban) 0.69 - 0.83 (Rural)				0.49 - 0.75		1.27 - 1.39 ^a 1.77 - 2.23 ^b		1.43 - 1.57 ^a 5.00 - 7.00 ^b		50% - 70%				1.5 - 2.5
High (3)	≥ 0.95 (Urban) ≥ 0.83 (Rural)				> 0.75		> 1.39 ^a > 2.23 ^b		> 1.57 ^a > 7.00 ^b		< 50%				> 2.5

Safety Needs Refinements and Contributing Factors

- Safety hot spot is present in Segment 260|60-4, which changed the need from None to Low
- See **Appendix D** for detailed information on contributing factors

Table 15: Final Safety Needs

Segment		Performance Score and Level of Need							Initial Segment Need	Hot Spots	Recently Completed Projects	Final Segment Need
		Safety Index	Directional Safety Index		% of Fatal + Incapacitating Injury Crashes Involving SHSP Top 5 Emphasis Area Behaviors	% of Fatal + Incapacitating Injury Crashes Involving Trucks	% of Fatal + Incapacitating Injury Crashes Involving Motorcycles	% of Fatal + Incapacitating Injury Crashes Involving Non-Motorized Travelers				
			EB	WB								
260-1		0.09	0.00	0.18	Insufficient Data	Insufficient Data	Insufficient Data	Insufficient Data	0.0	-	None	None
260-2		0.65	0.08	1.29	Insufficient Data	Insufficient Data	Insufficient Data	Insufficient Data	0.3	-	None	Low
260-3		0.71	1.11	0.31	0.80	Insufficient Data	Insufficient Data	Insufficient Data	0.9	-	FY16 H8256: Cheney Ranch Loop - Bison Ridge Trail shoulder widening and guardrail replacement (MP 334.46-337.48)	Low
260 60-4		0.80	0.75	0.84	0.19	Insufficient Data	Insufficient Data	Insufficient Data	0.0	MP 340-342 (WB)	FY16 H8256: Cheney Ranch Loop - Bison Ridge Trail shoulder widening and guardrail replacement (MP 334.46-337.48) FY17 H5107: Roadway widening, US 60 EB from SR 77 intersection (MP 342-343.5)	Low
260-5		0.55	0.71	0.39	0.25	Insufficient Data	Insufficient Data	Insufficient Data	0.0	-	FY16 H8378: Constructed asphaltic concrete pathway, concrete scupper, sidewalk ramps and other miscellaneous work (MP 350.67-351.20)	None
60-6		0.23	0.34	0.11	Insufficient Data	Insufficient Data	Insufficient Data	Insufficient Data	0.0	-	None	None
60-7		1.40	2.13	0.67	0.64	Insufficient Data	Insufficient Data	Insufficient Data	3.9	-	None	High
60-8		0.00	0.00	0.00	Insufficient Data	Insufficient Data	Insufficient Data	Insufficient Data	0.0	-	FY16 H8438: Constructed sidewalks, curbs, and vegetation areas, as well as installing lighting systems (MP 387.88-388.11)	None
60-9		0.00	0.00	0.00	Insufficient Data	Insufficient Data	Insufficient Data	Insufficient Data	0.0	-	None	None
Level of Need (Score)		Performance Score Needs Scale							Segment Level Need Scale	a: 2 or 3 or 4 Lane Divided Highway b: 4 or 5 Lane Undivided Highway c: 2 or 3 Lane Undivided Highway *A segment need rating of 'None' does not indicate a lack of needed improvements; rather, it indicates that the segment performance score exceeds the established performance thresholds and strategic solutions for that segment will not be developed as part of this study.		
None* (0)	a b c	≤ 0.92 ≤ 0.93 ≤ 0.98			≤ 47% ≤ 45% ≤ 53%	≤ 5% ≤ 7% ≤ 6%	≤ 19% ≤ 7% ≤ 22%	≤ 3% ≤ 6% ≤ 3%	0			
Low (1)	a b c	0.92 - 1.07 0.93 - 1.06 0.98 - 1.02			47% - 50% 45% - 48% 53% - 55%	5% - 6% 7% - 8% 6% - 7%	19% - 22% 7% - 8% 22% - 25%	3% - 4% 6% - 7% 3% - 4%	≤ 1.5			
Medium (2)	a b c	1.07 - 1.38 1.06 - 1.33 1.02 - 1.10			50% - 57% 48% - 54% 55% - 59%	6% - 8% 8% - 11% 7% - 8%	22% - 29% 8% - 10% 25% - 30%	4% - 5% 7% - 9% 4% - 5%	1.5 - 2.5			
High (3)	a b c	≥ 1.38 ≥ 1.33 ≥ 1.10			≥ 57% ≥ 54% ≥ 59%	≥ 8% ≥ 11% ≥ 8%	≥ 29% ≥ 10% ≥ 30%	≥ 5% ≥ 9% ≥ 5%	≥ 2.5			

Freight Needs Refinements and Contributing Factors

- There are no bridge vertical clearance hot spots on the corridor
- See **Appendix D** for detailed information on contributing factors

Table 16: Final Freight Needs

Segment		Performance Score and Level of Need							Initial Segment Need	Hot Spots	Recently Completed Projects	Final Segment Need	
		Freight Index	Directional TTTI		Directional TPTI		Closure Duration						Bridge Vertical Clearance
			NB	SB	NB	SB	NB	SB					
260-1		0.47	1.10	1.12	1.94	2.30	26.32	2969.40	No UP	3.9	0	None	High
260-2		0.75	1.10	1.08	1.32	1.33	0.00	2154.82	No UP	0.3	0	None	Low
260-3		0.78	1.10	1.08	1.23	1.62	1226.19	2140.04	No UP	0.9	0	FY16 H8256: Cheney Ranch Loop - Bison Ridge Trail shoulder widening and guardrail replacement (MP 334.46-337.48)	Low
260 60-4		0.21	1.23	1.32	4.67	4.77	1924.09	1001.99	No UP	2.8	0	FY16 H8256: Cheney Ranch Loop - Bison Ridge Trail shoulder widening and guardrail replacement (MP 334.46-337.48) FY17 H5107: Roadway widening, US 60 EB from SR 77 intersection (MP 342-343.5)	Medium
260-5		0.20	1.30	1.31	5.72	4.48	6.30	2651.60	No UP	2.6	0	FY16 H8378: Constructed asphaltic concrete pathway, concrete scupper, sidewalk ramps and other miscellaneous work (MP 350.67-351.20)	High
60-6		0.20	1.37	1.38	4.94	4.85	3058.62	37.36	No UP	4.3	0	None	High
60-7		0.48	1.15	1.09	2.45	1.75	5578.00	61.47	No UP	3.9	0	None	High
60-8		0.26	1.21	1.27	4.36	3.41	4383.71	290.20	No UP	1.7	0	None	Medium
60-9		0.58	1.13	1.10	1.81	1.64	4081.11	267.88	No UP	4.2	0	None	High
Level of Need (Score)		Performance Score Need Scale							Segment Level Need Scale	a: Uninterrupted Flow b: Interrupted Flow *A segment need rating of 'None' does not indicate a lack of needed improvements; rather, it indicates that the segment performance score exceeds the established performance thresholds and strategic solutions for that segment will not be developed as part of this study.			
None* (0)	a b	≥ 0.74 ≥ 0.28	≤ 1.21 ≤ 1.53	≤ 1.37 ≤ 4.00	≤ 71.07		≥ 16.33	0					
Low (1)	a b	0.70 - 0.74 0.22 – 0.28	1.21 - 1.27 1.53 - 1.77	1.37 - 1.43 4.00 - 5.00	71.07 - 97.97		16.17 - 16.33	≤ 1.5					
Medium (2)	a b	0.64 - 0.70 0.12 – 0.22	1.27 - 1.39 1.77 - 2.23	1.43 - 1.57 5.00 - 7.00	97.97 - 151.75		15.83 - 16.17	1.5 - 2.5					
High (3)	a b	≤ 0.64 ≤ 0.12	≥ 1.39 ≥ 2.23	≥ 1.57 ≥ 7.00	≥ 151.75		≤ 15.83	≥ 2.5					

a: Uninterrupted Flow
b: Interrupted Flow

**A segment need rating of 'None' does not indicate a lack of needed improvements; rather, it indicates that the segment performance score exceeds the established performance thresholds and strategic solutions for that segment will not be developed as part of this study.*

Segment Review

The needs for each segment were combined to numerically estimate the average level of need for each segment of the corridor. **Table 17** provides a summary of needs for each segment across all performance areas, with the average need score for each segment presented in the last row of the table. A weighting factor of 1.5 is applied to the need scores of the performance areas identified as emphasis areas (Pavement, Safety, and Freight for the SR 260 | US 60 corridor). Overall, four segments have been assessed with a Medium average need and the remaining five segments with a Low average need.

Table 17: Summary of Needs by Segment

Performance Area	260-1	260-2	260-3	260 60-4	260-5	60-6	60-7	60-8	60-9
	MP 306-310	MP 310-323	MP 323-337	MP 337-345	MP 341-357	MP 345-352	MP 352-384	MP 384-389	MP 389-402
Pavement+	High	Low	None*	High	Low	None*	Low	None*	None*
Bridge	None*	None*	None*	None*	None*	None*	None*	None*	None*
Mobility	Low	Low	Low	Medium	Medium	Medium	Low	Low	Low
Safety+	None*	Low	Low	Low	None*	None*	High	None*	None*
Freight+	High	Low	Low	Medium	High	High	High	Medium	High
Average Need	1.54	0.85	0.62	1.69	1.23	1.00	1.08	0.62	0.85

* A segment need rating of 'None' does not indicate a lack of needed improvements; rather, it indicates that the segment performance score exceeds the established performance thresholds and strategic solutions for that segment will not be developed as part of this study.

+ Identified as an emphasis area for the SR 260 | US 60 corridor.

Average Need Scale	
None*	< 0.1
Low	0.1 - 1.0
Medium	1.0 - 2.0
High	> 2.0

Summary of Corridor

The needs in each performance area are shown in **Figure 21** and summarized below:

Pavement Needs

- Five segments (260-1, 260-2, 260|60-4, 260-5 and 60-7) contain Pavement hot spots
- Segments 260-1 and 260|60-4 have final needs of High; Segments 260-5, 60-5 and 60-7 have final needs of Low

Bridge Needs

- Three segments (260-1, 260|60-4, and 60-9) do not include any bridges
- Segment 60-6 includes one bridge, the Rocky Arroyo Bridge (No. 384), which could have a repetitive investment issue
- There are no final Bridge needs along the corridor

Mobility Needs

- Low Mobility needs exist on six of the nine segments of the corridor
- Three segments (260|60-4, 260-5, and 60-6) have Medium final needs
- Many segments contain Medium or High closure extent needs
- Many segments contain Medium or High directional PTI needs
- Bicycle accommodation needs are High on six of the nine segments of the corridor

Safety Needs

- High Safety needs exist on one of the nine segments
- Safety hot spots exist in Segment 260|60-4 in the westbound direction

Freight Needs

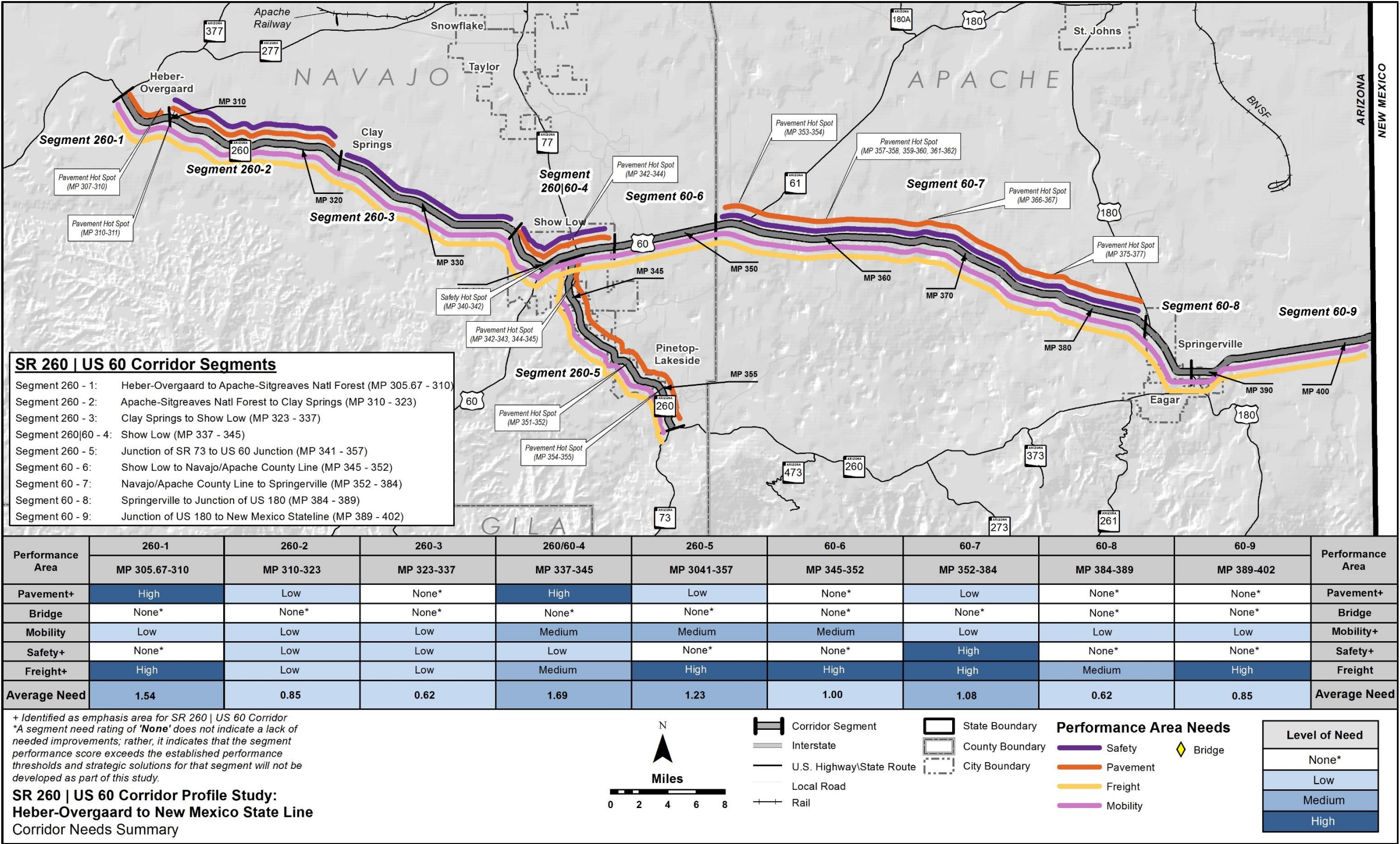
- High Freight needs exist on five of the nine segments
- Many segments along the corridor contain High directional PTI and closure duration needs
- No freight hot spots exist along the corridor

Overlapping Needs

This section identifies overlapping performance needs on the SR 260 | US 60 corridor, which provides guidance to develop strategic solutions that address more than one performance area with elevated levels of need. Completing projects that address multiple needs presents the opportunity to more effectively improve overall performance. A summary of the overlapping needs that relate to locations with elevated levels of need is provided below:

- All segments have Needs in more than one performance area
- Segment 260|60-4, which has the highest average need score of all the segments of the corridor, has elevated needs in Pavement, Mobility, and Freight
- Segment 260|60-4 contains elevated Needs in the Pavement, Mobility, and Freight performance areas
- Segment 260-1 has elevation Needs in Pavement and Freight
- Segments 260-5 and 60-6 have elevated Needs in the Mobility and Freight performance areas
- Segment 60-7 contains elevated Needs in the Safety and Freight performance areas

Figure 21 Corridor Needs Summary



Appendix A: Corridor Performance Maps

This appendix contains maps of each primary and secondary measure associated with the five performance areas for the SR 260/US 60 corridor. The following are the areas and maps included:

Pavement Performance Area:

- Pavement Index and Hot Spots
- Pavement Serviceability (directional)
- Percentage of Pavement Area Failure

Bridge Performance Area:

- Bridge Index and Hot Spots
- Bridge Sufficiency
- Percent of Deck Area on Functionally Obsolete Bridges
- Lowest Bridge Rating

Mobility Performance Area:

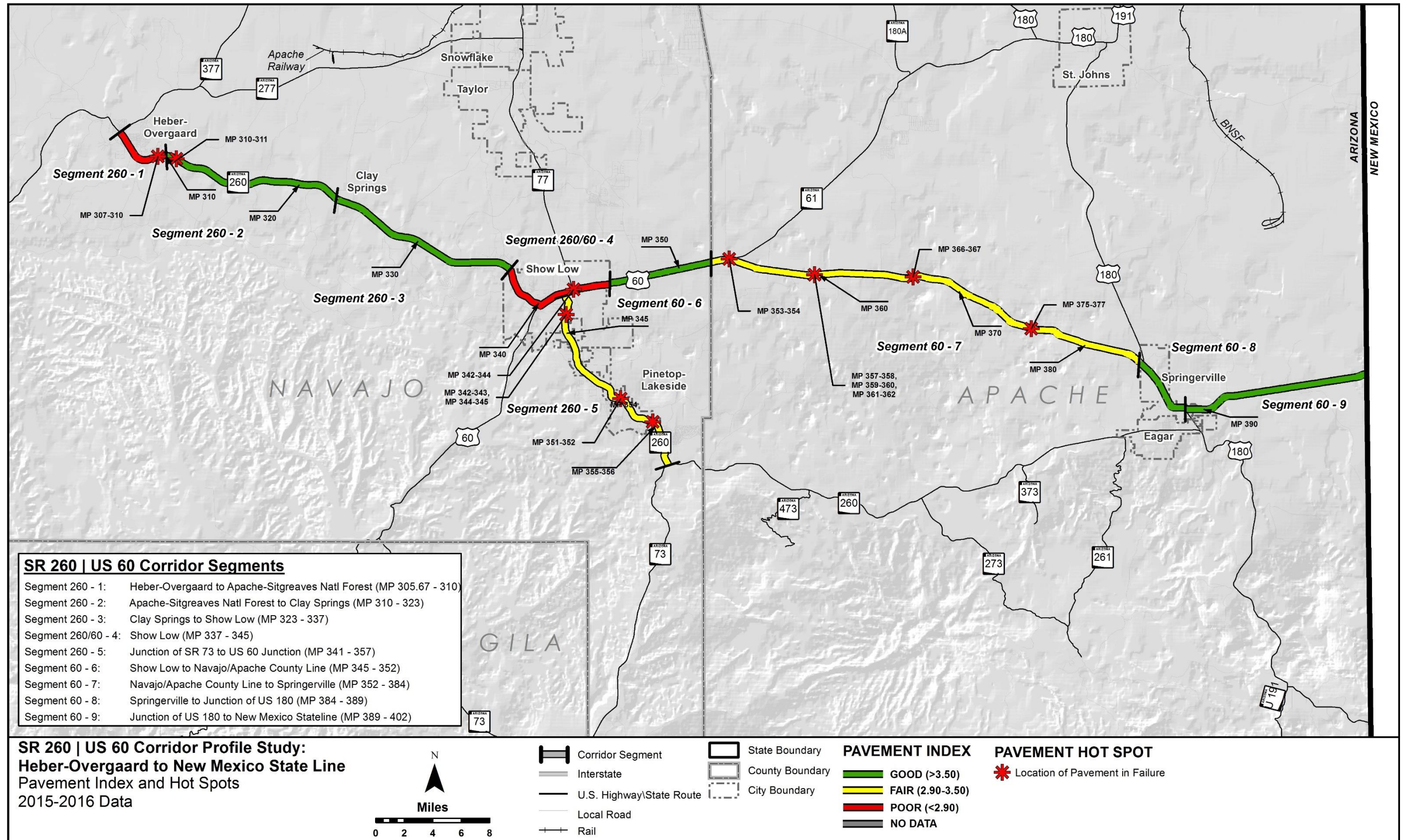
- Mobility Index
- Future Daily V/C
- Existing Peak V/C (directional)
- Average Instances Per Year a Given Milepost is Closed Per Segment Mile
- All Vehicles Travel Time Index
- All Vehicles Planning Time Index
- Multimodal Opportunities
- Percentage of Bicycle Accommodation

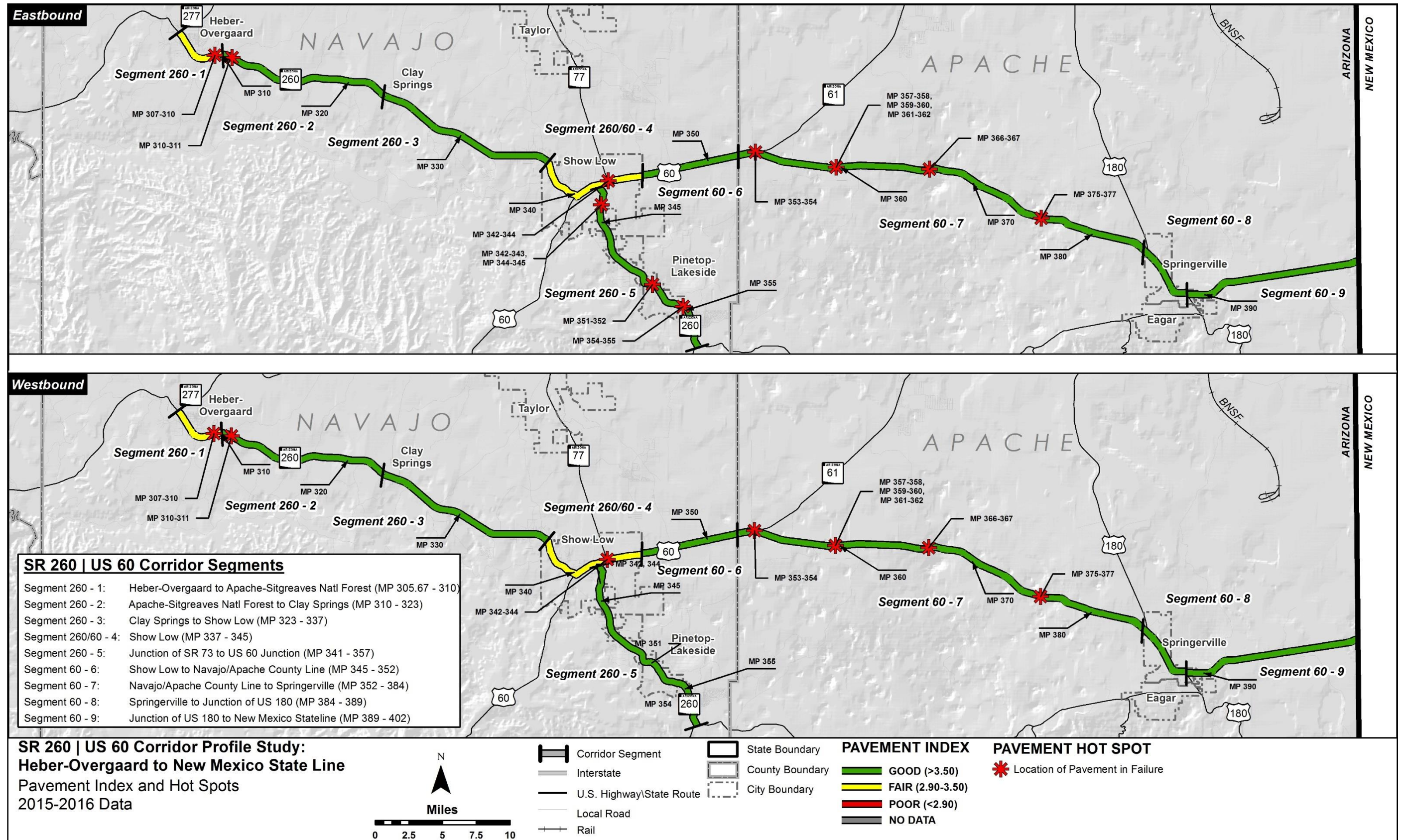
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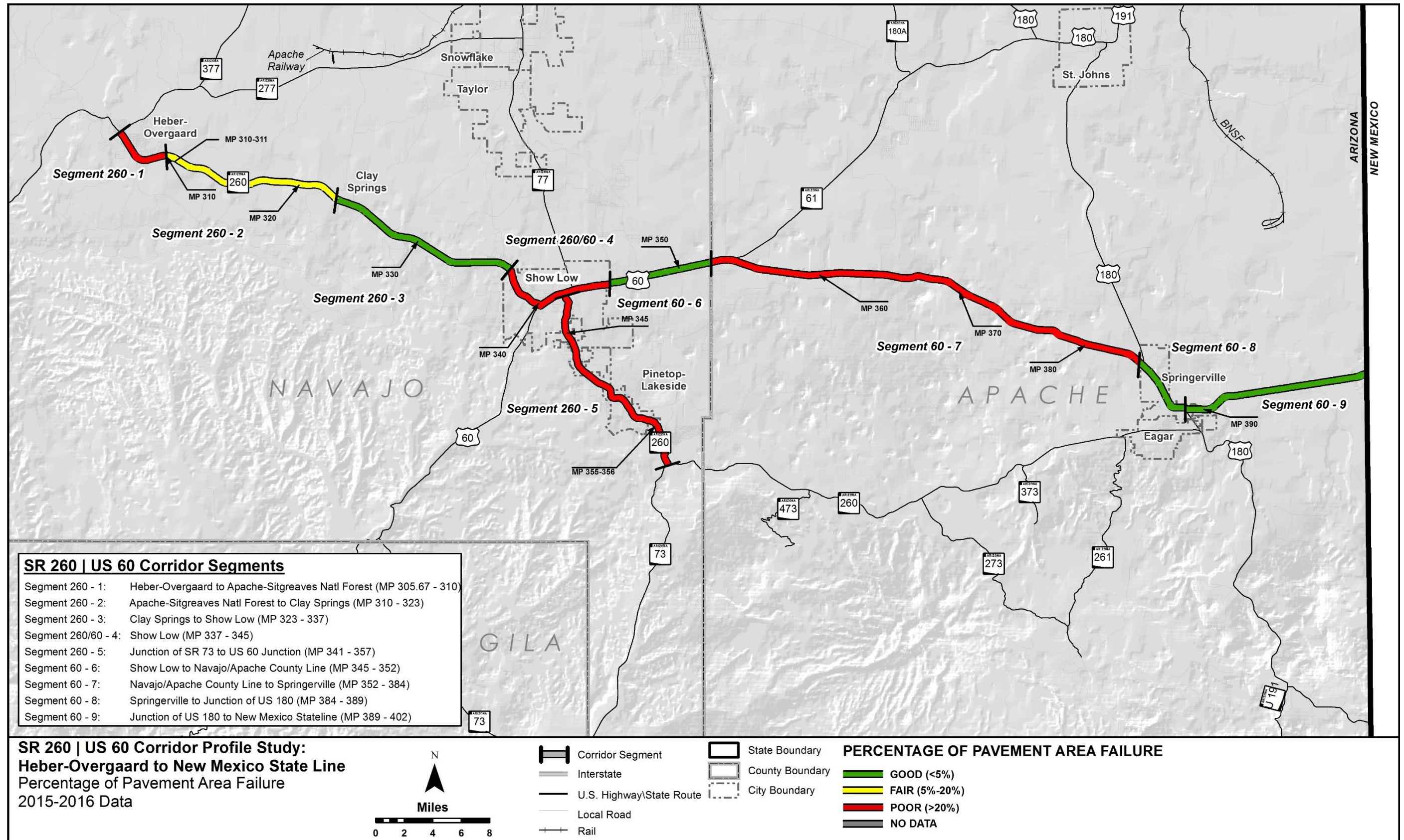
- Safety Index and Hot Spots
- Safety Index and Hot Spots (directional)
- Relative Frequency of Fatal + Incapacitating Injury Crashes Involving SHSP Top 5 Emphasis Areas Behaviors Compared to the Statewide Average for Similar Segments
- Relative Frequency of Fatal + Incapacitating Injury Crashes Involving Motorcycles Compared to the Statewide Average for Similar Segments

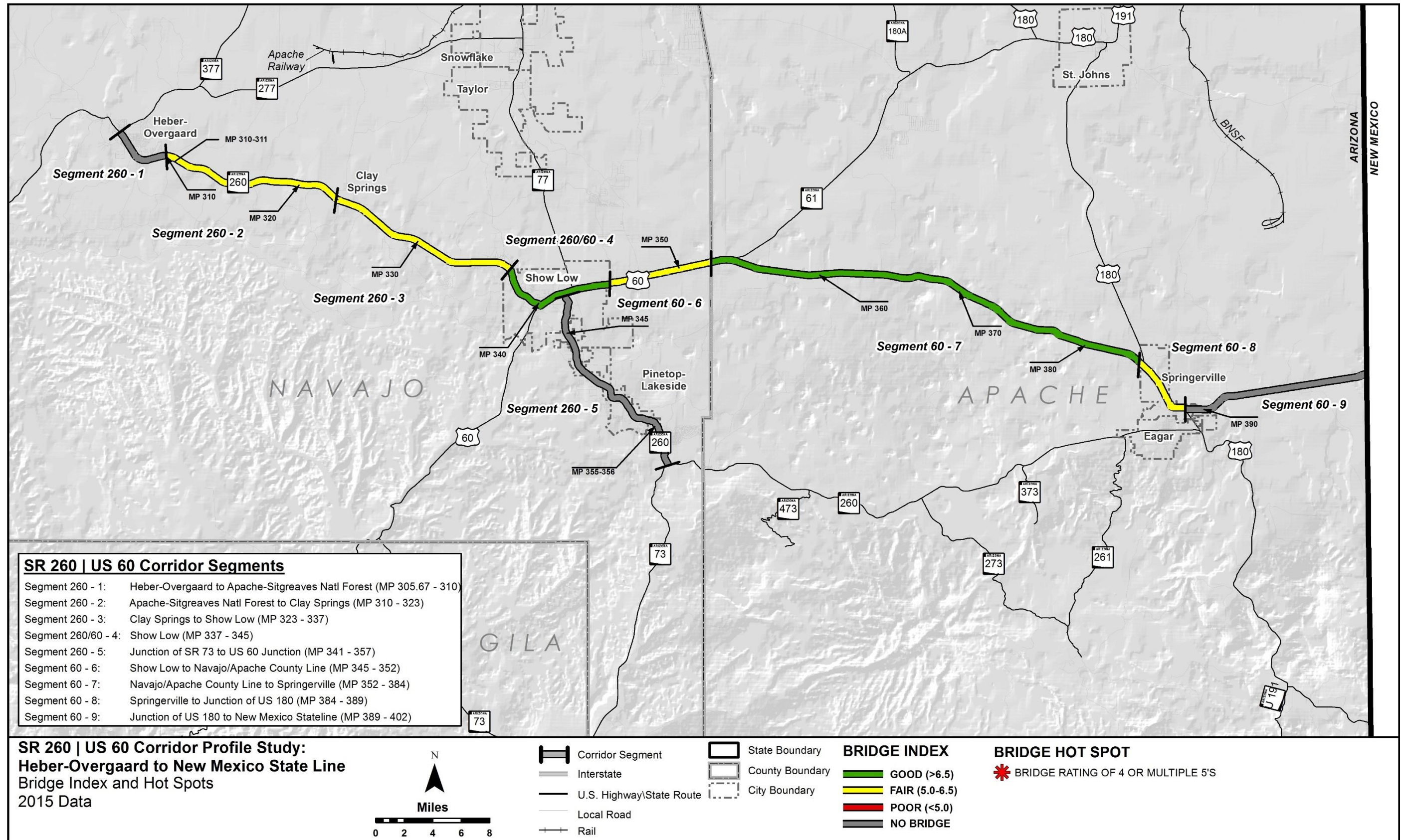
Freight Performance Area:

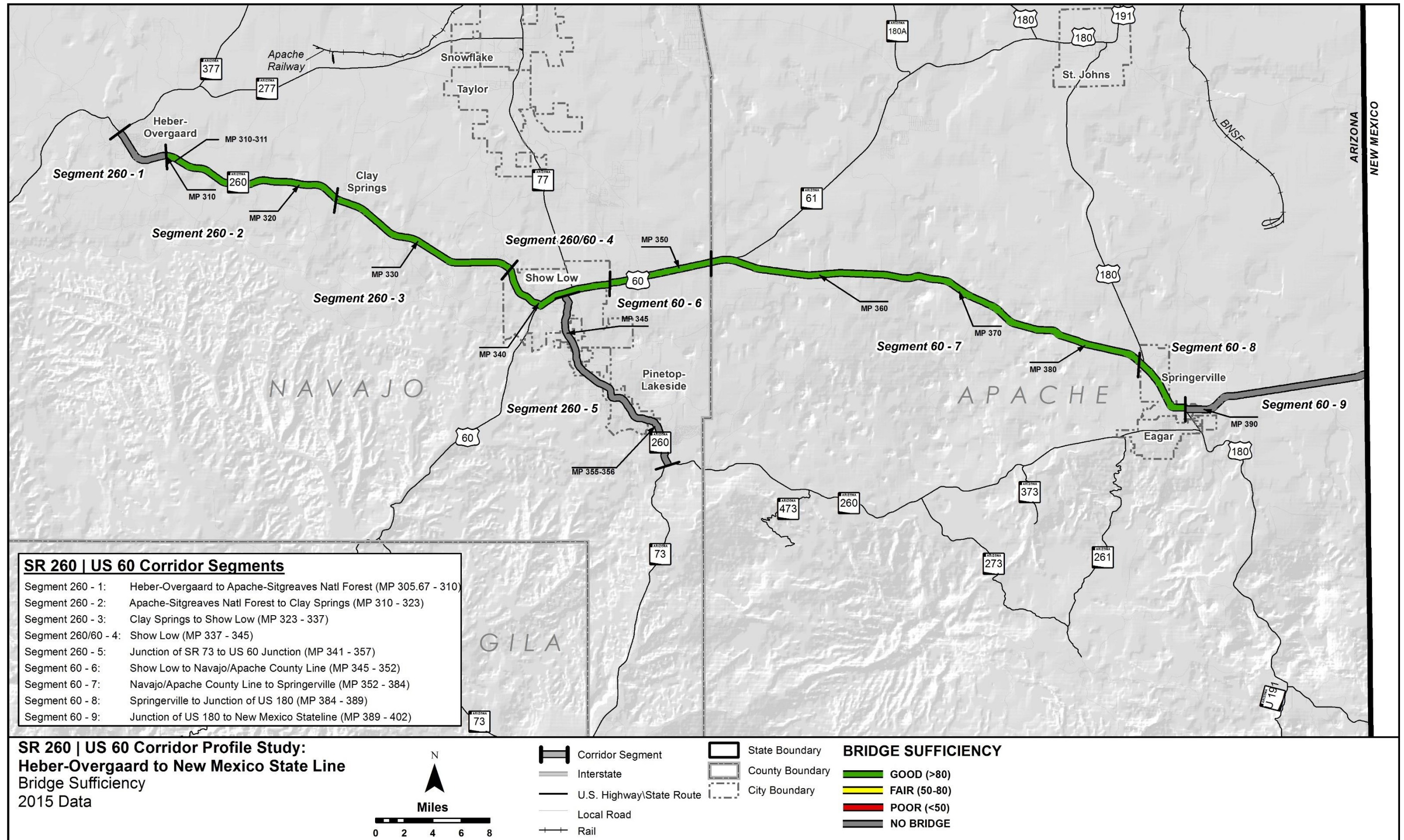
- Freight Index and Hot Spots
- Truck Travel Time Index
- Truck Planning Time Index
- Average Minutes Per Year Given Milepost is Closed Per Segment Mile
- Bridge Vertical Clearance

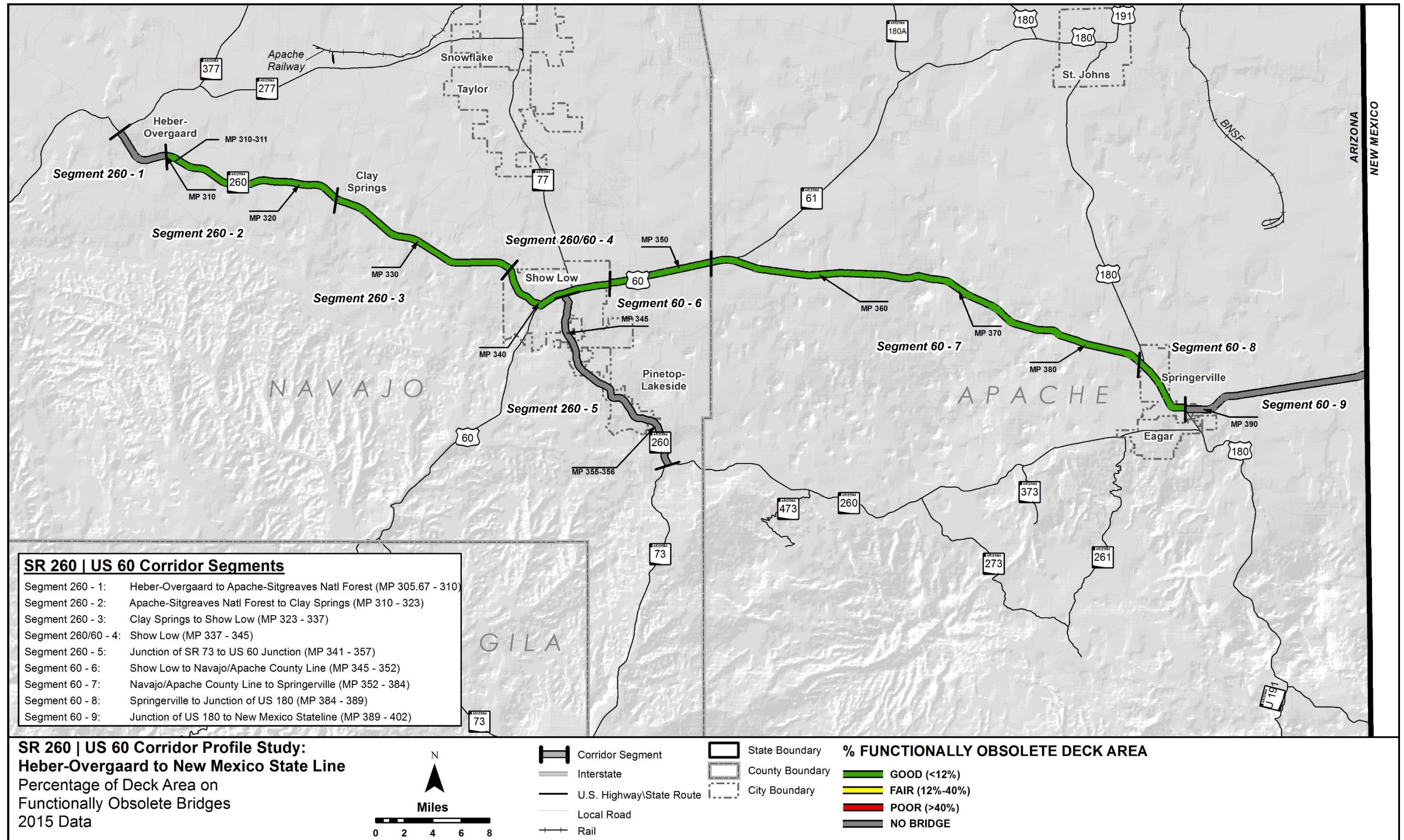


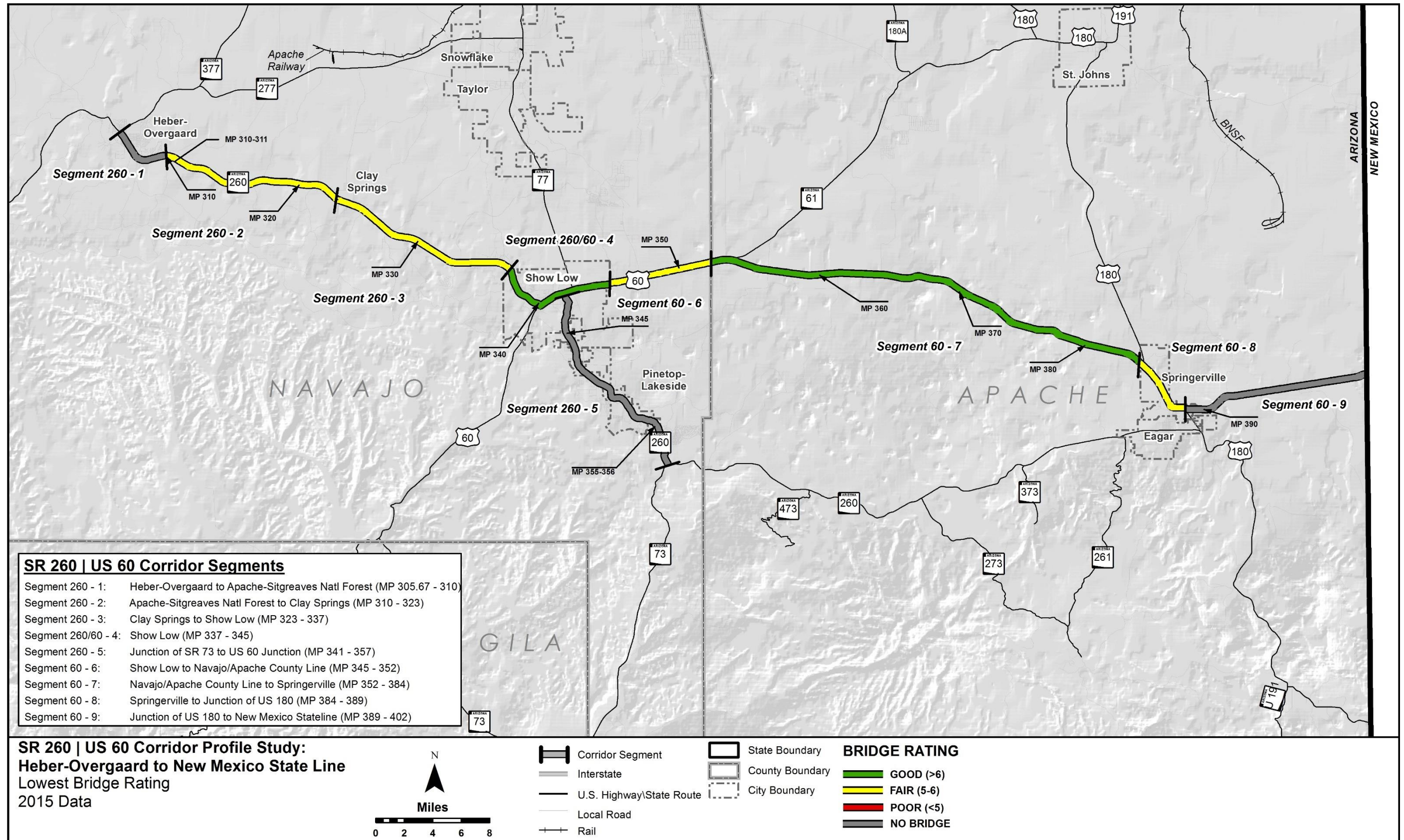


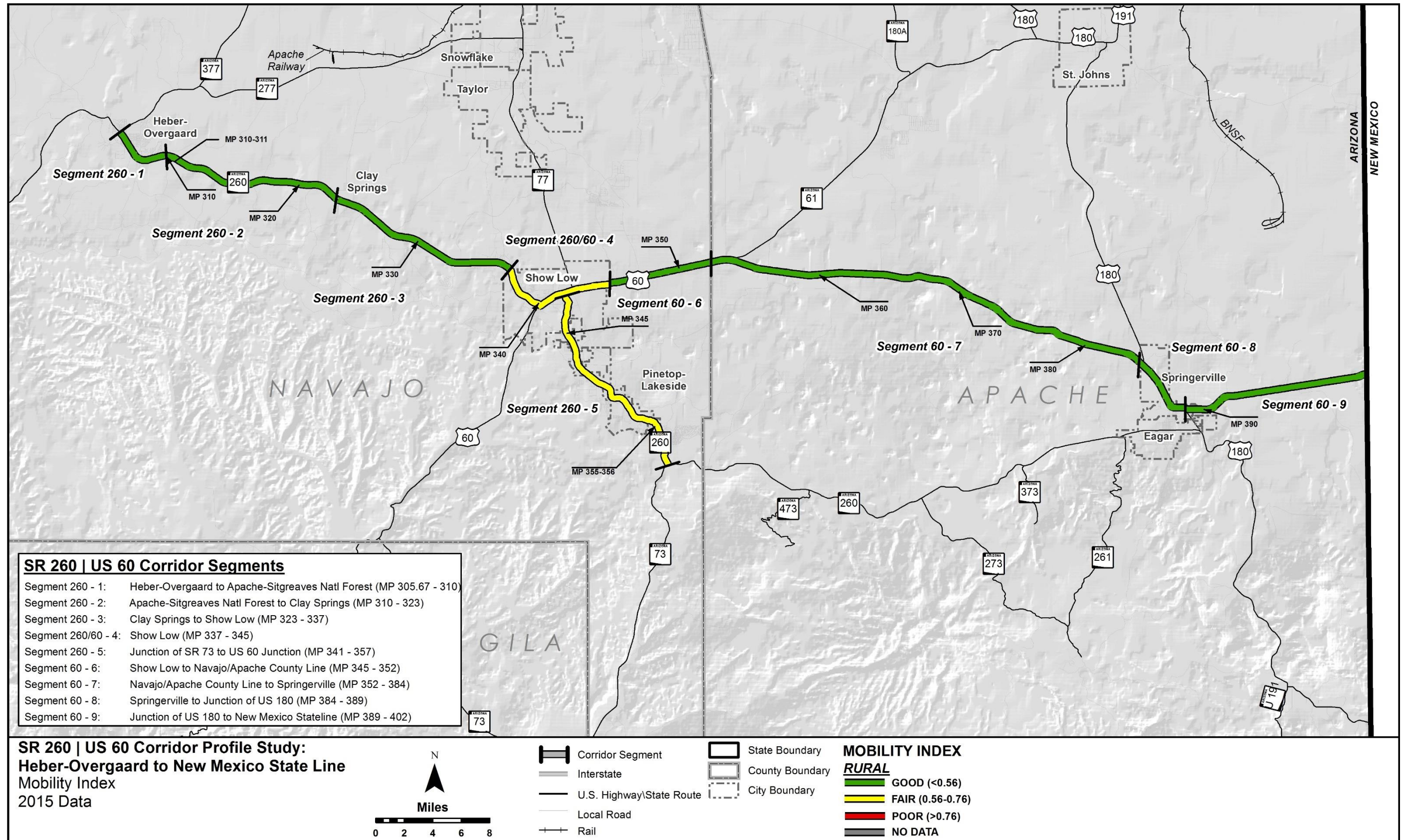


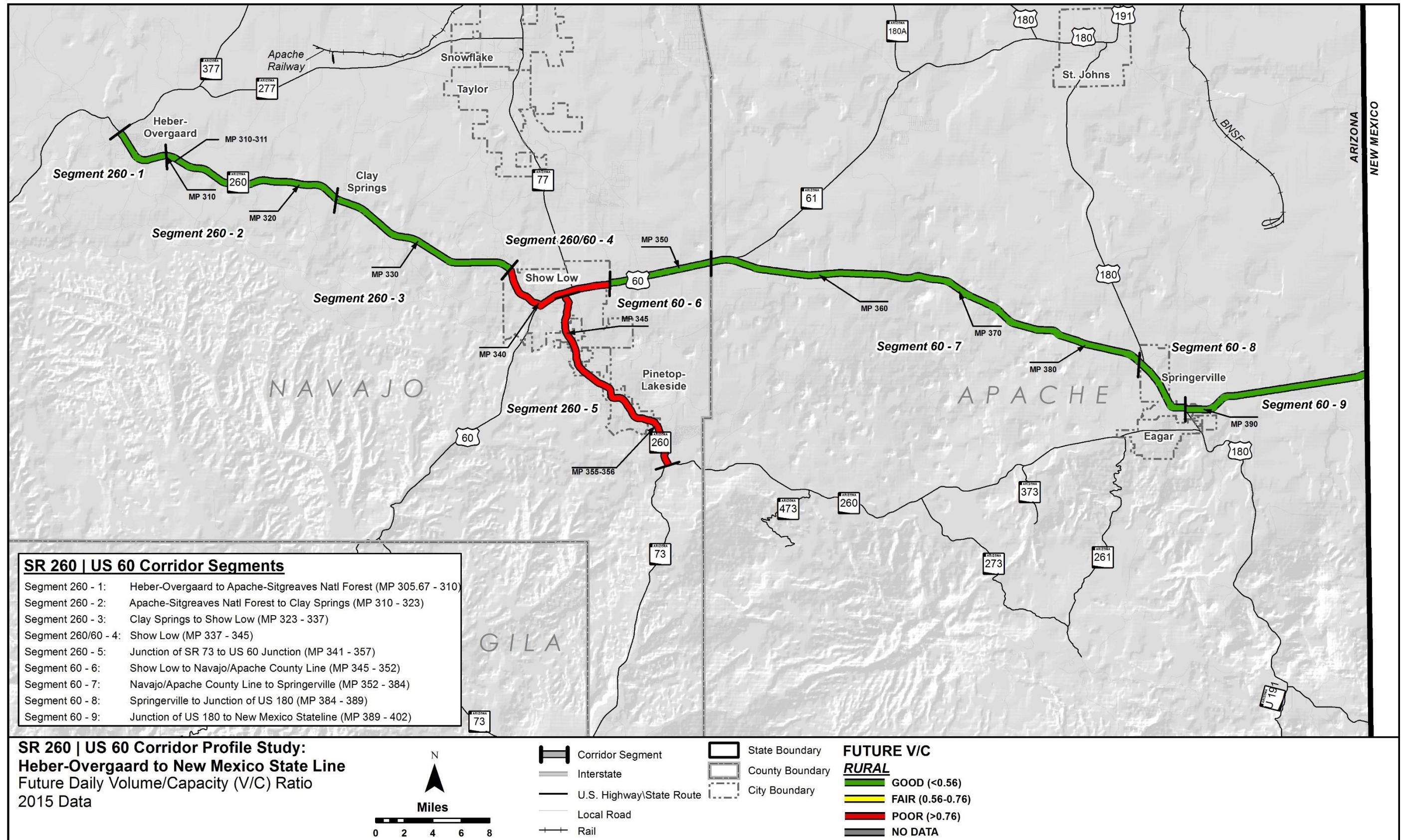


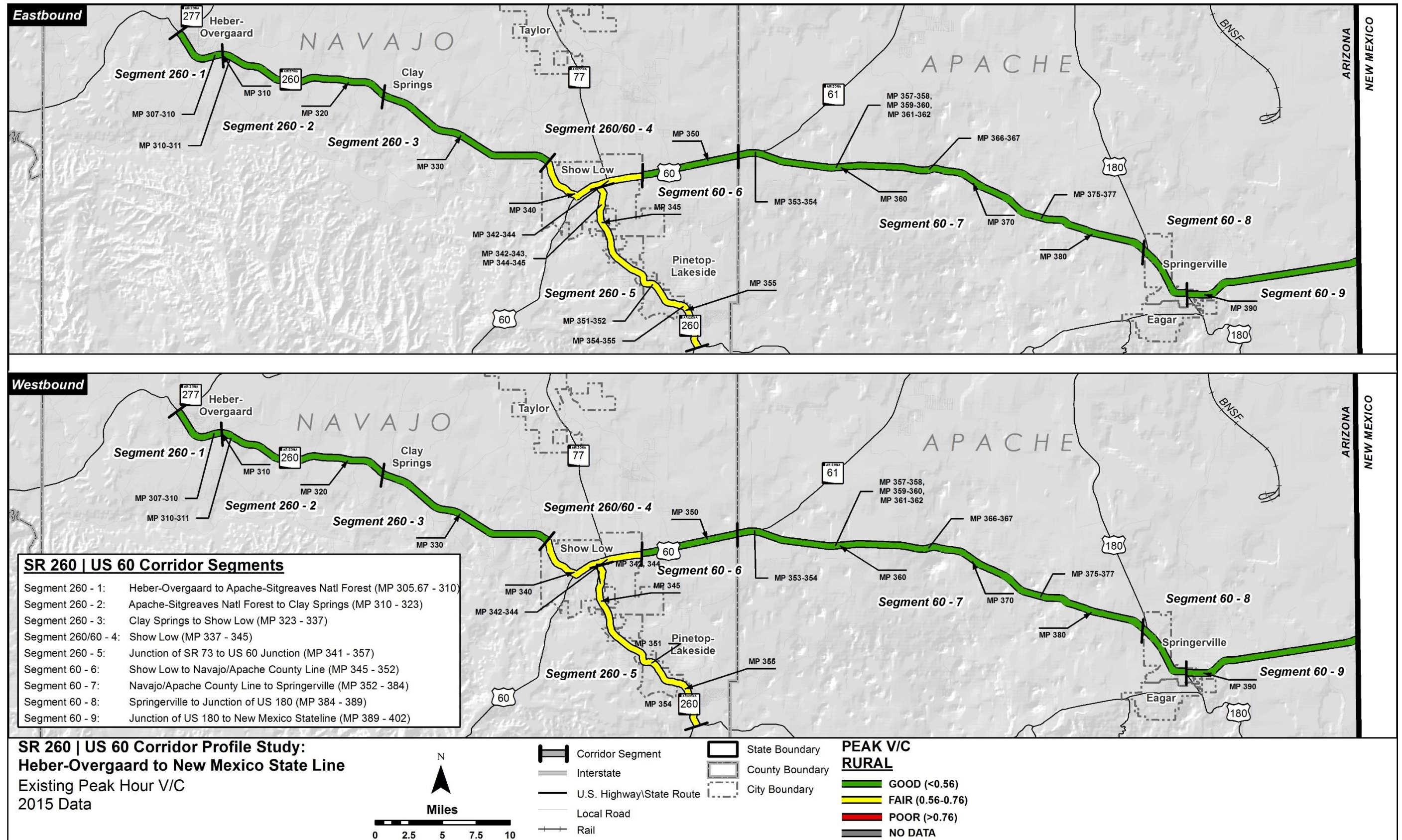


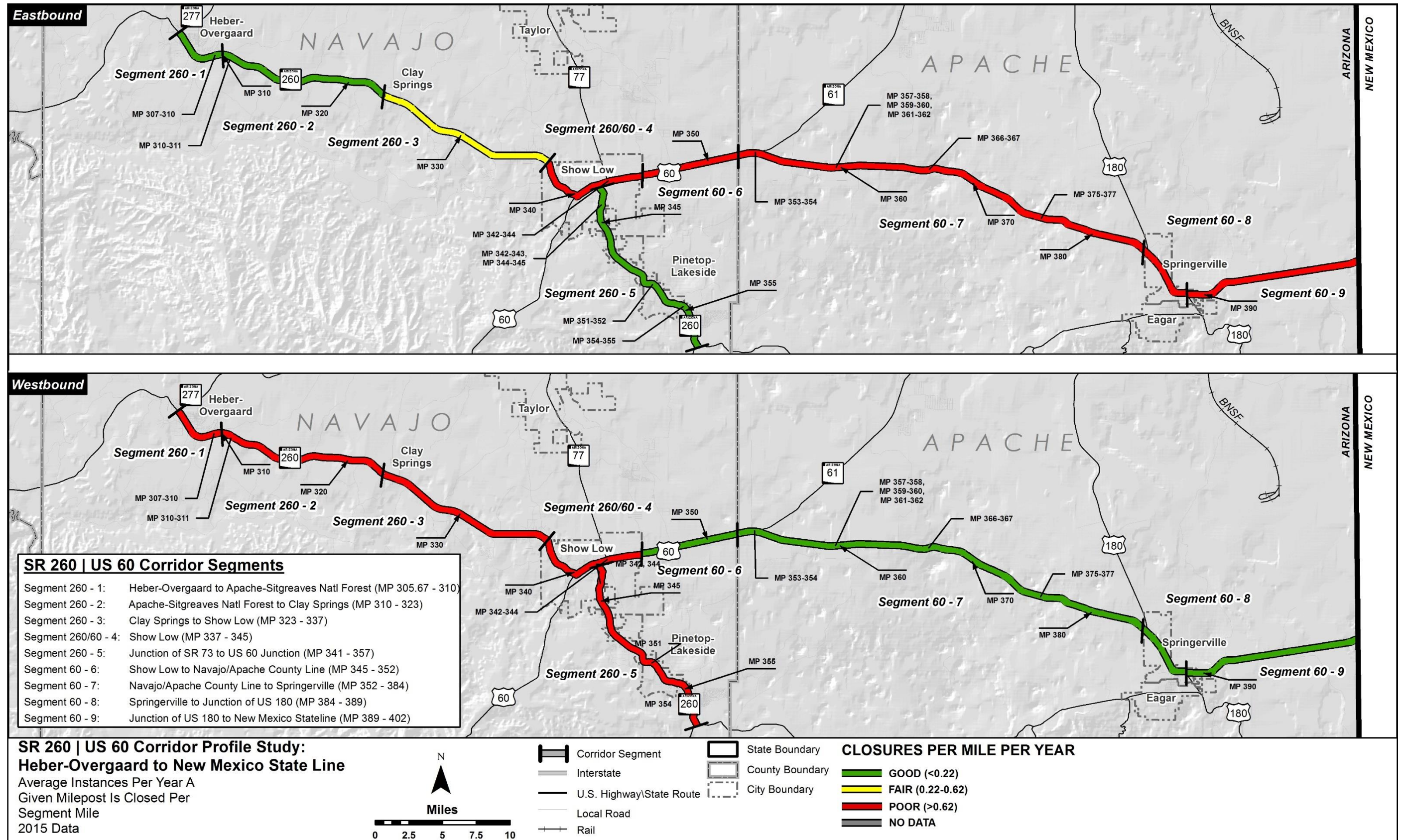


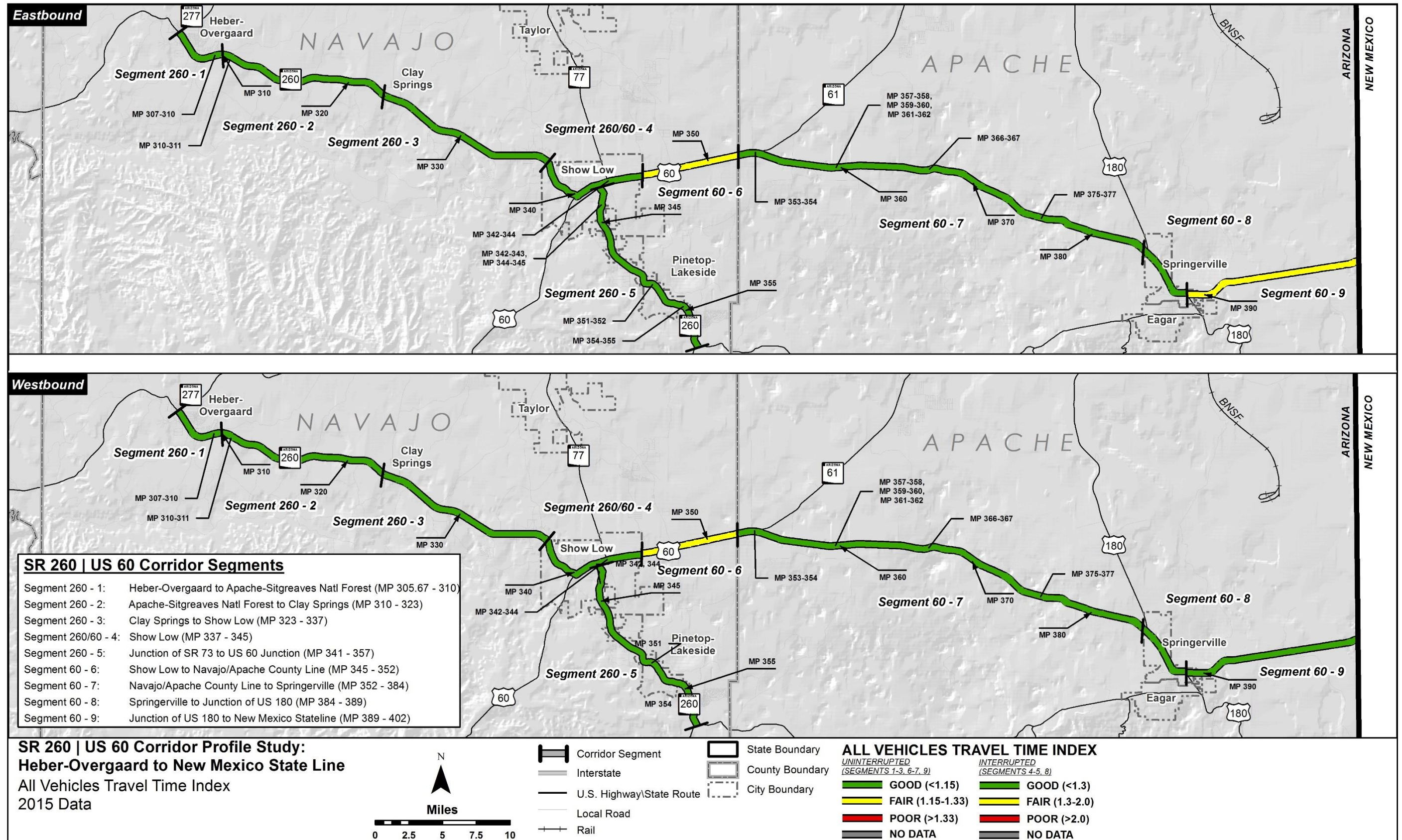


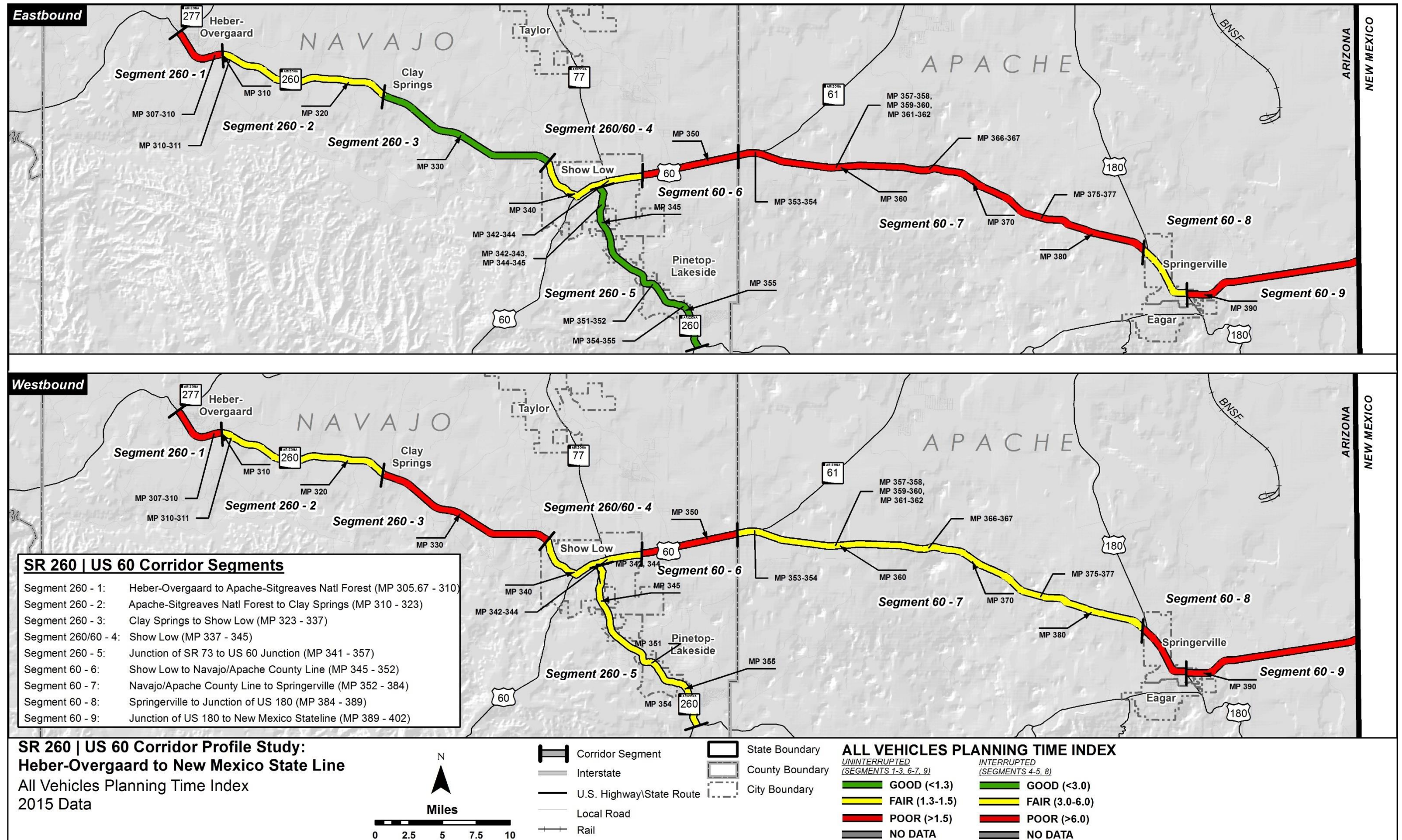


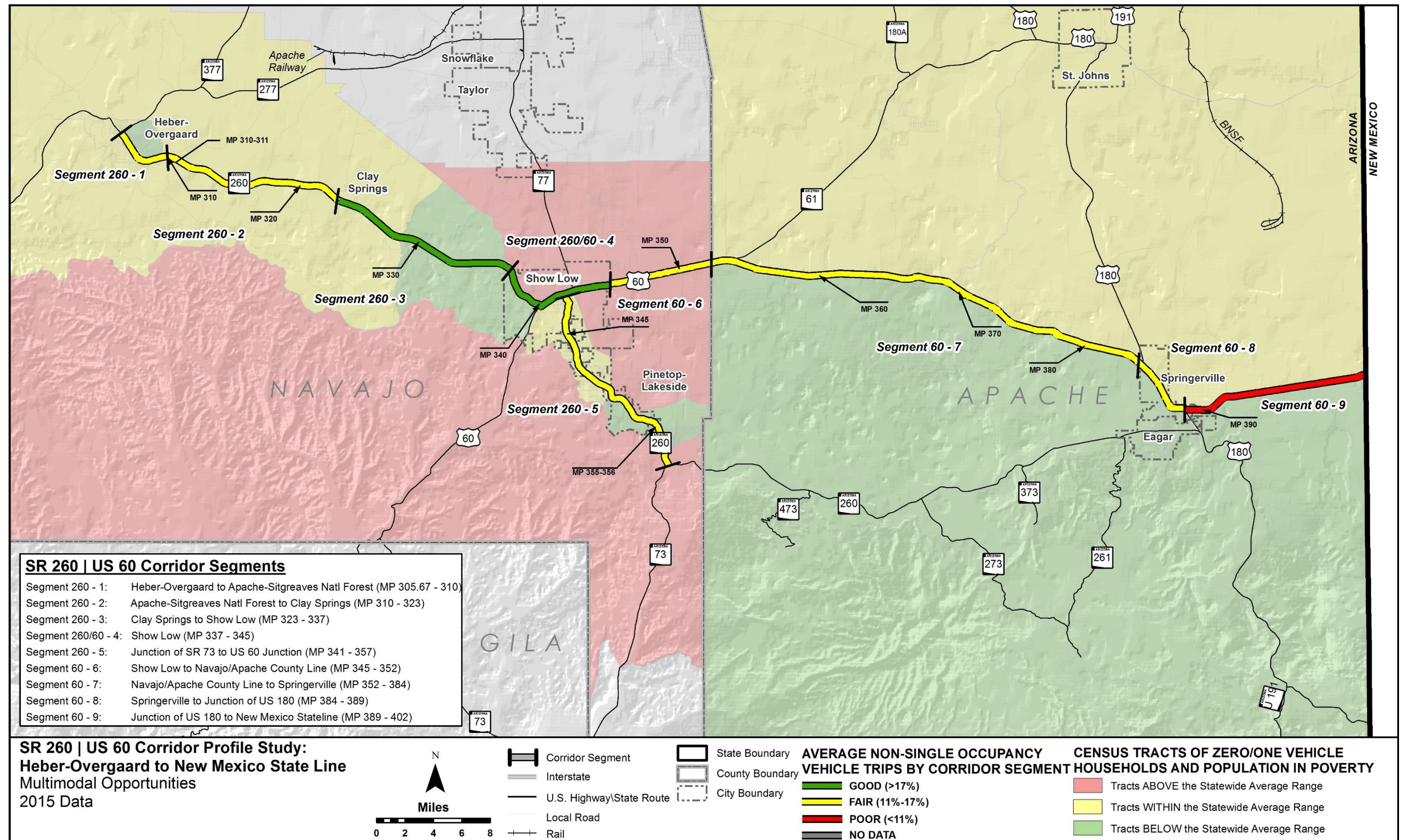


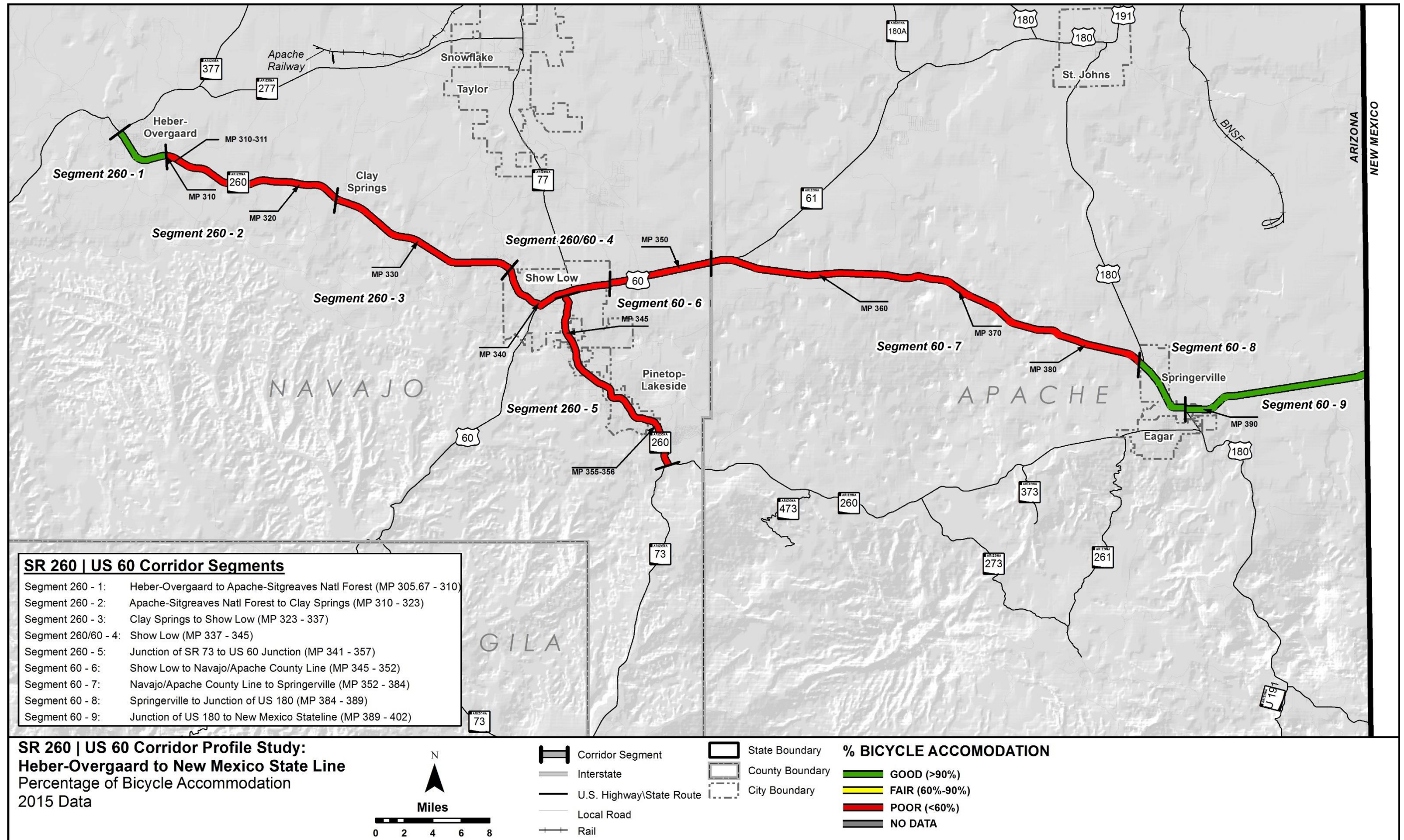


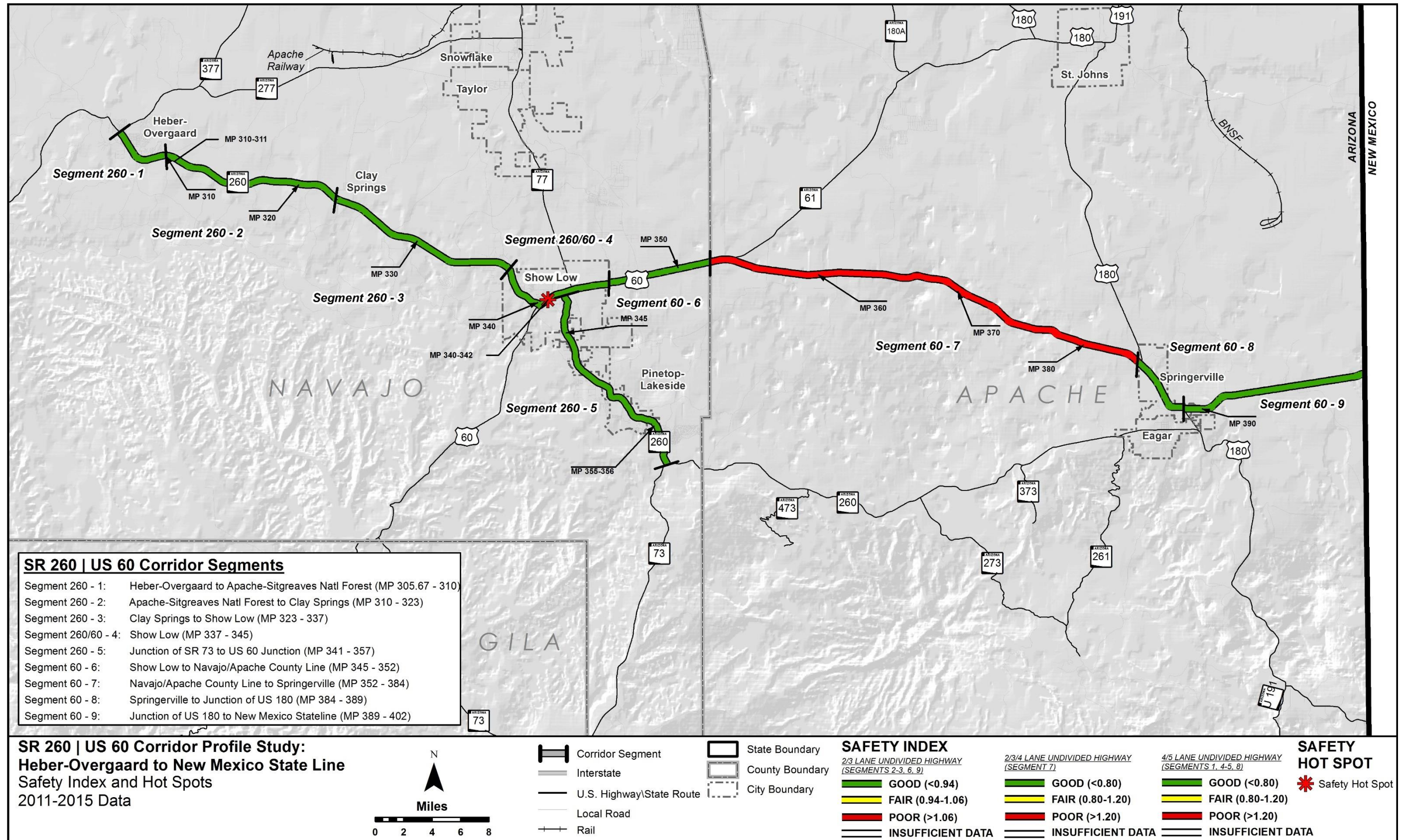


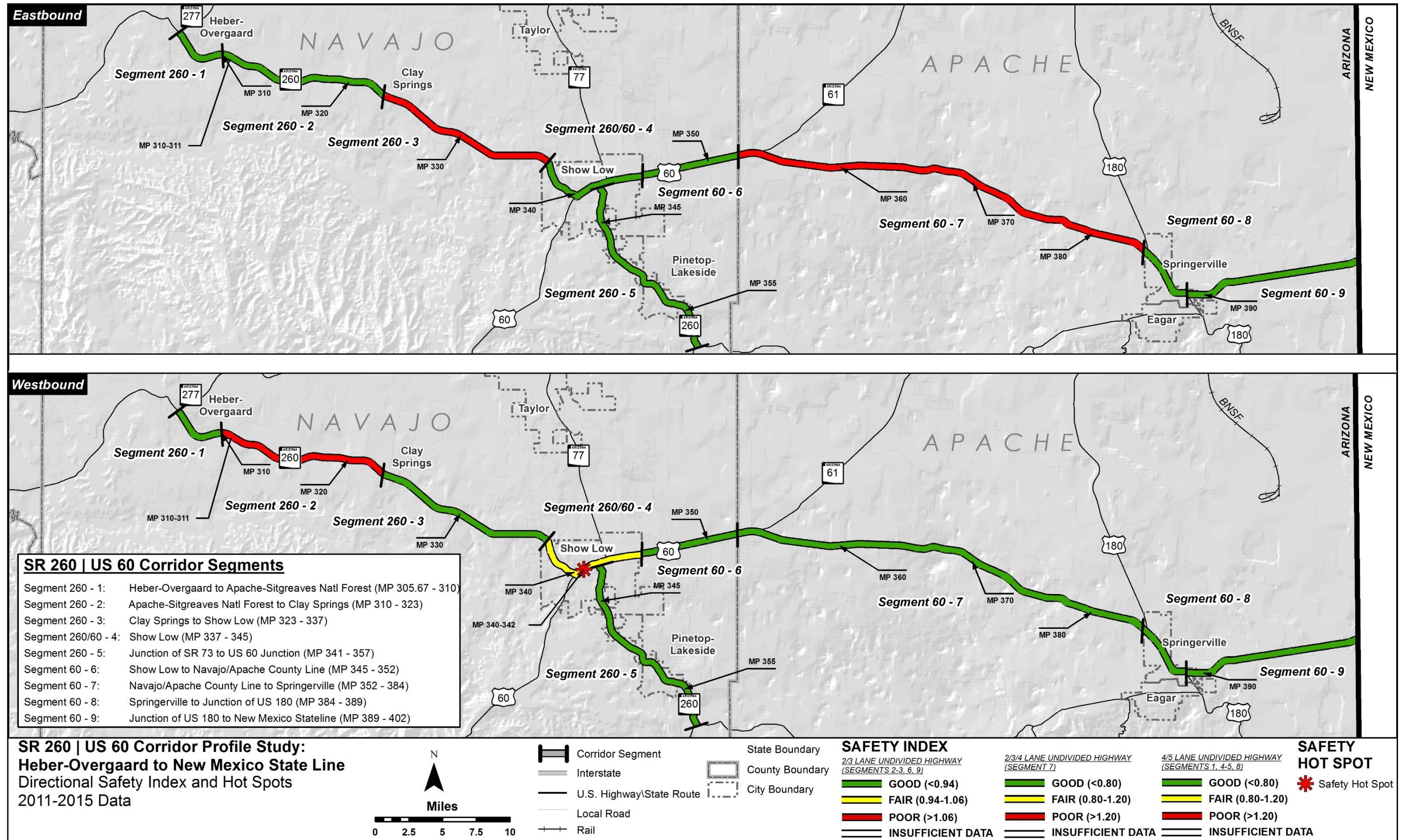


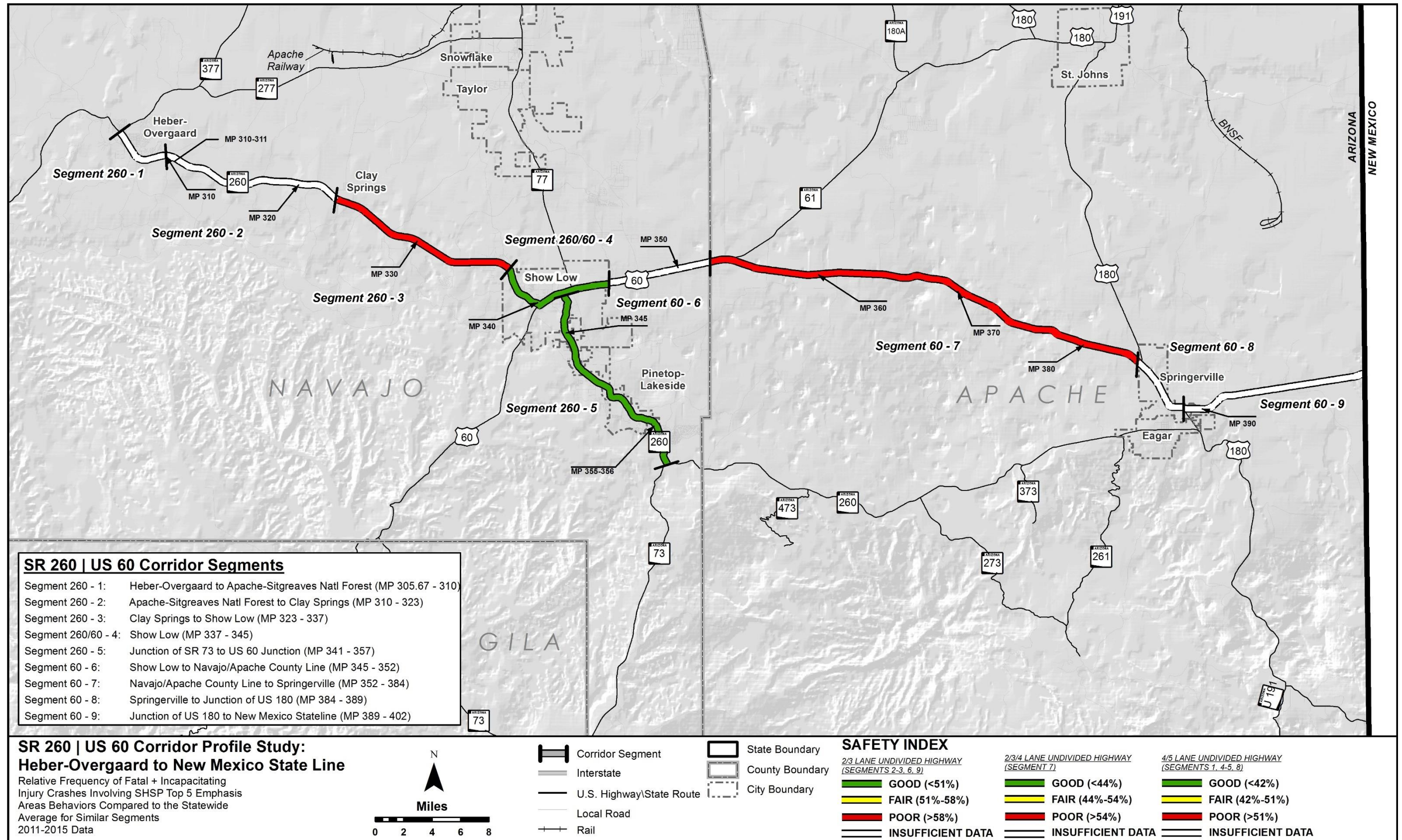


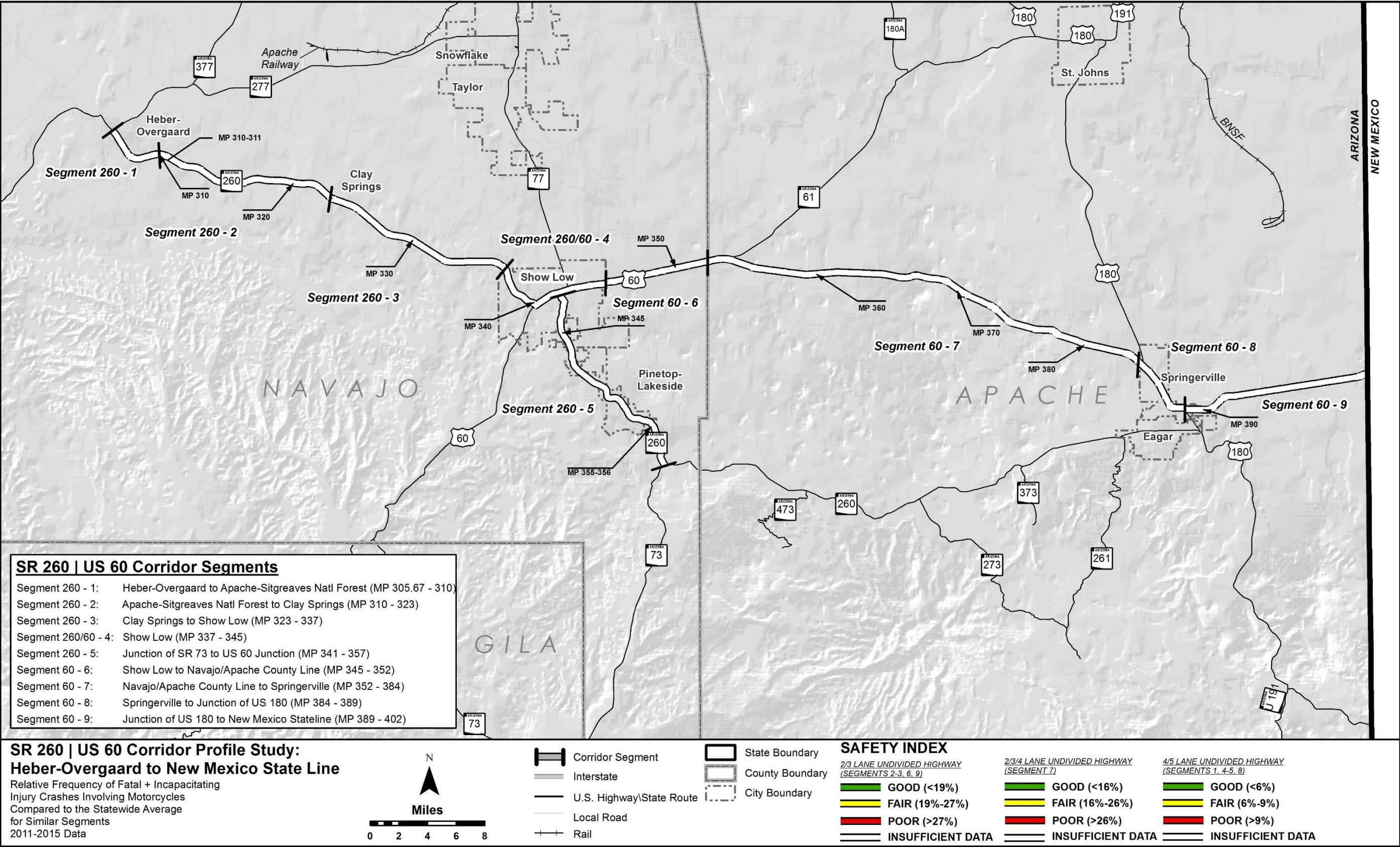


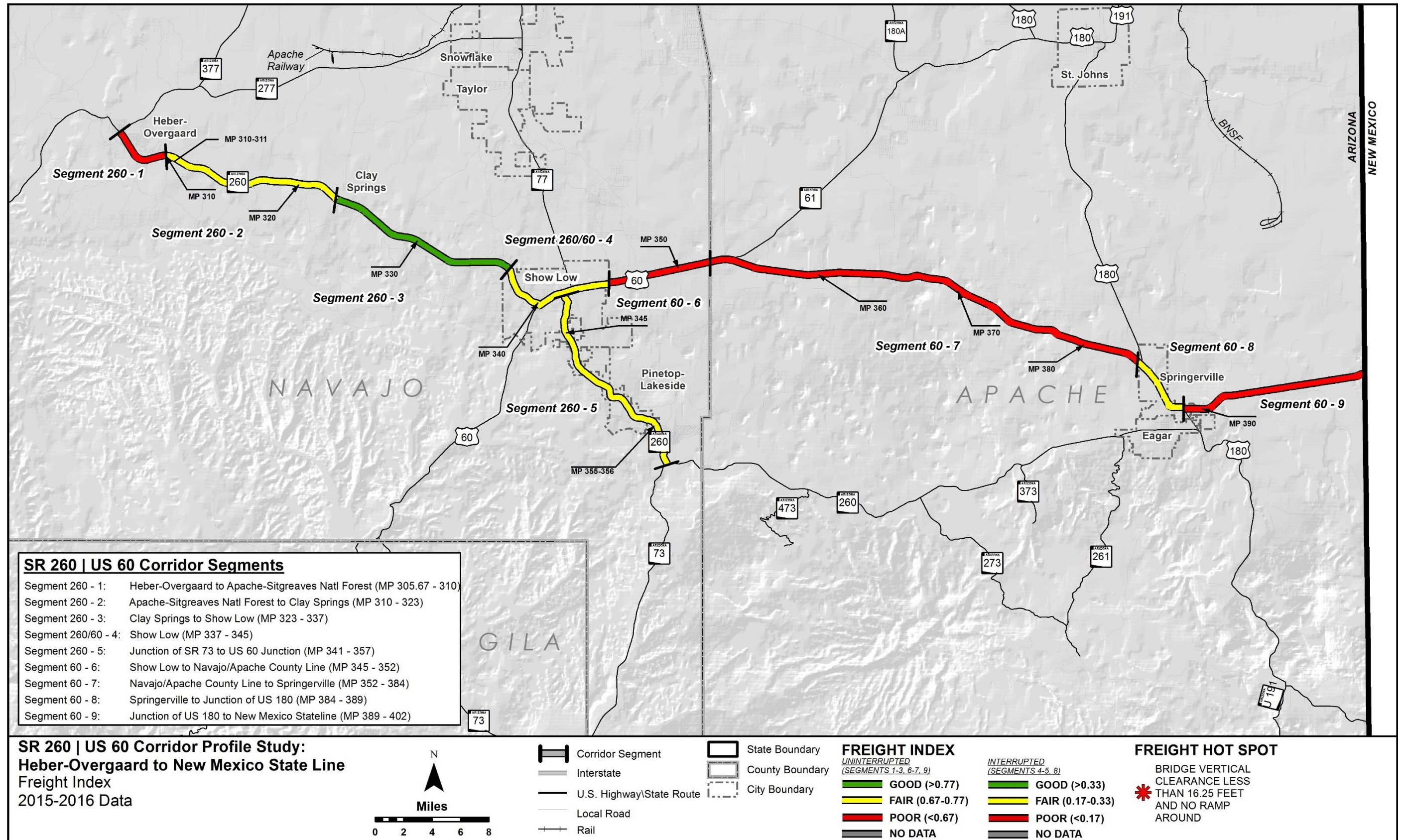


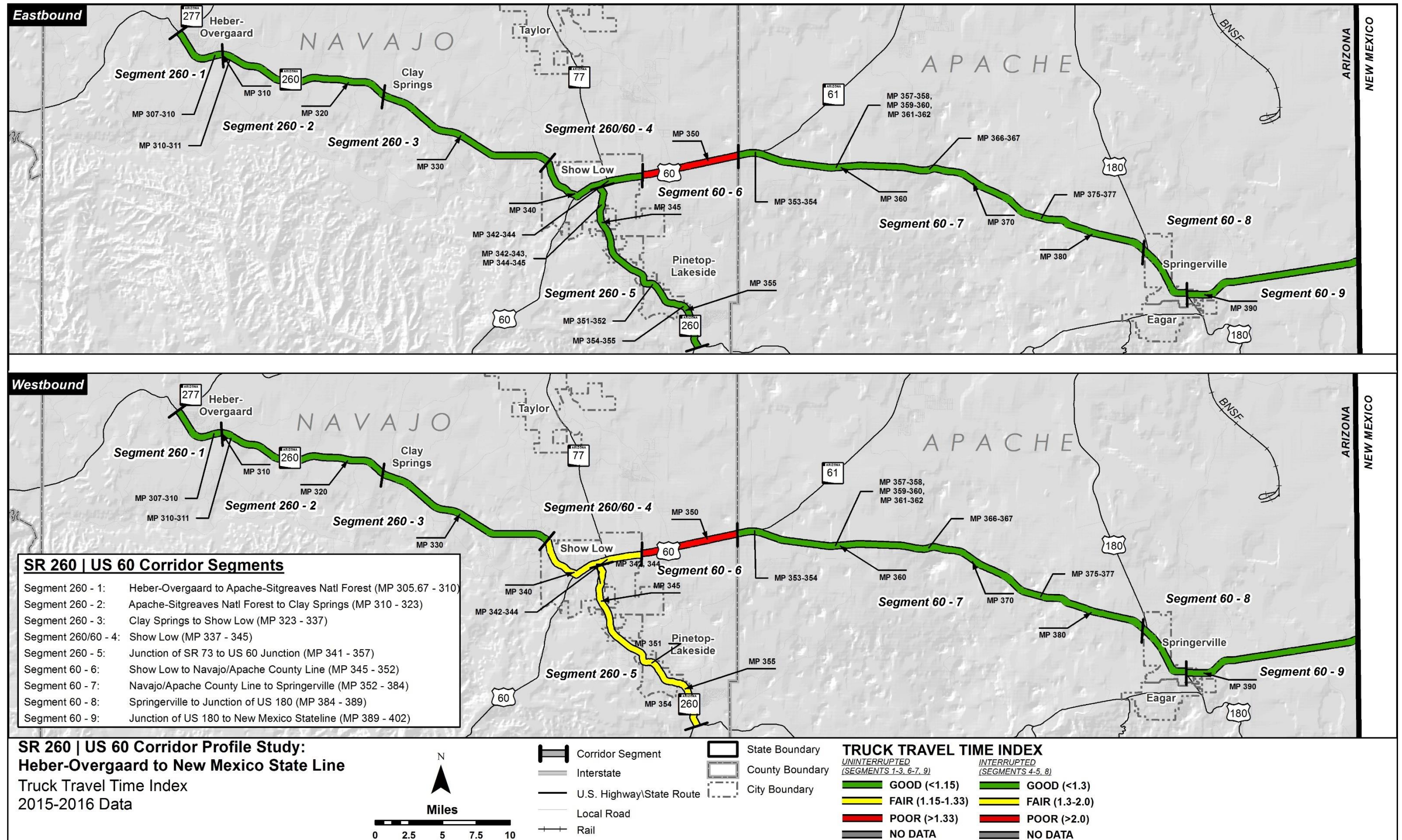


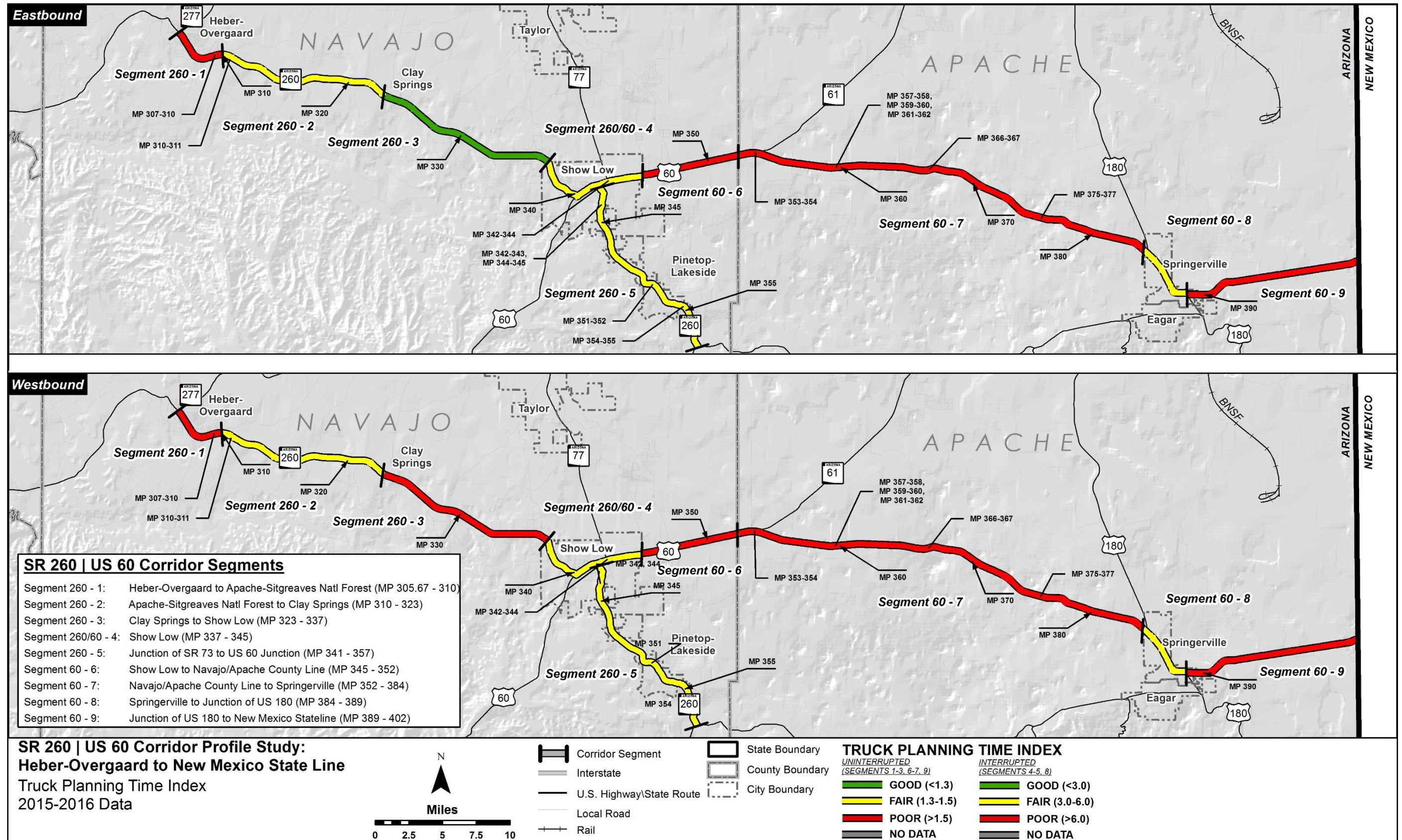


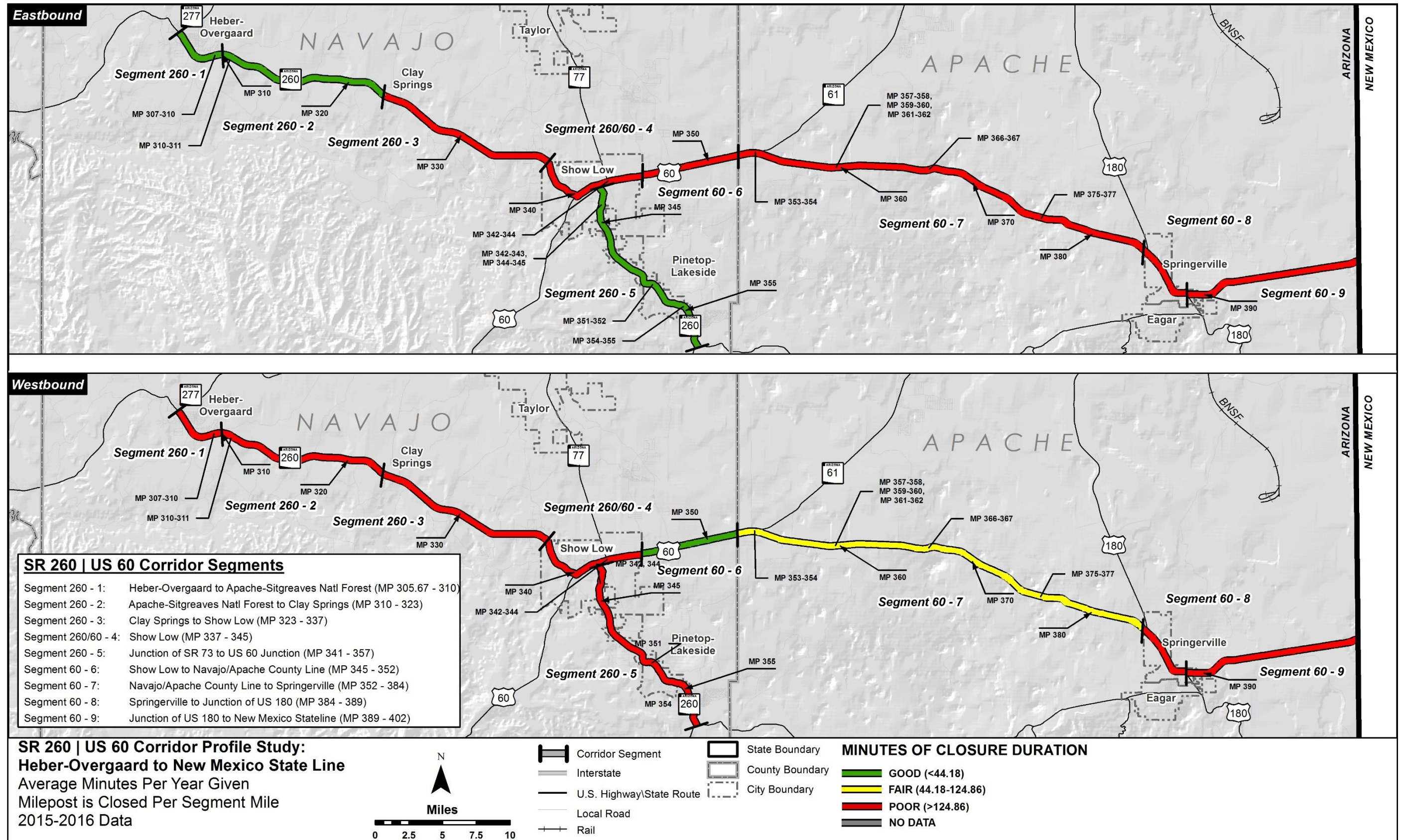


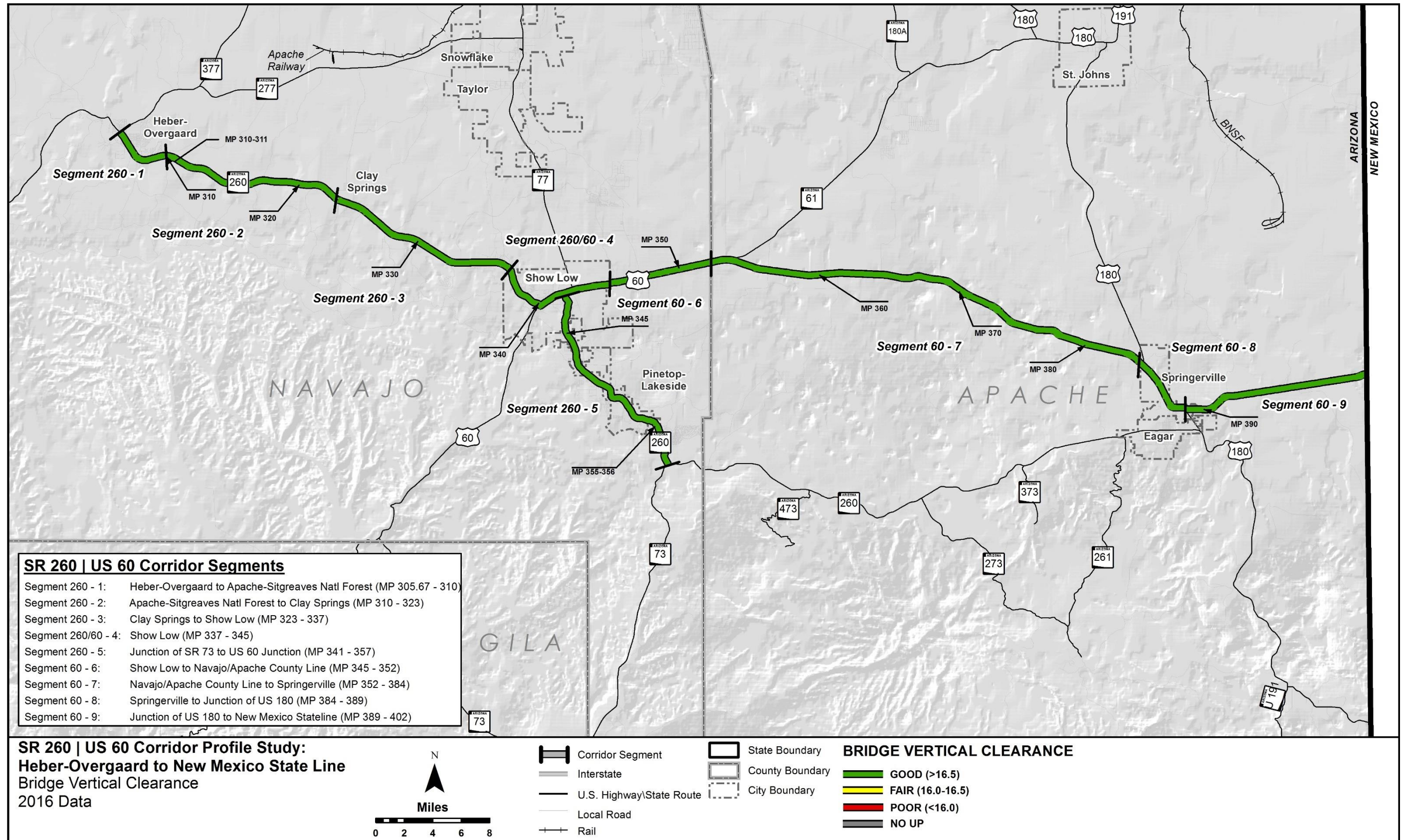








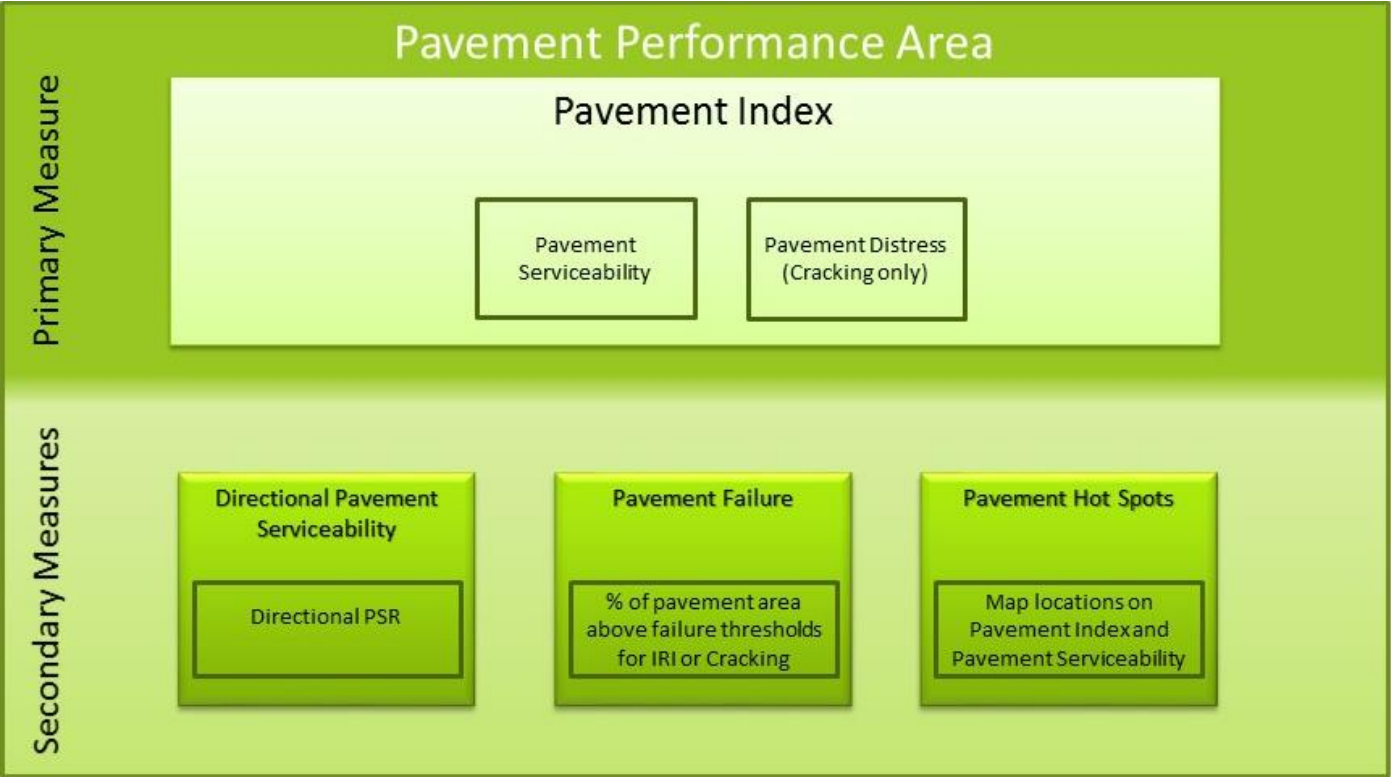




Appendix B: Performance Area Detailed Calculation Methodologies

Pavement Performance Area Calculation Methodologies

This section summarizes the approach for developing the primary and secondary performance measures in the Pavement performance area as shown in the following graphic:



This performance area is used to evaluate mainline pavement condition. Pavement condition data for ramps, frontage roads, crossroads, etc. was not included in the evaluation.

Primary Pavement Index

The Pavement Index is calculated based on the use of two pavement condition ratings from the ADOT Pavement Database. The two ratings are the International Roughness Index (IRI) and the Cracking rating. The calculation of the Pavement Index uses a combination of these two ratings.

The IRI is a measurement of the pavement roughness based on field-measured longitudinal roadway profiles. To facilitate the calculation of the index, the IRI rating was converted to a Pavement Serviceability Rating (PSR) using the following equation:

$$PSR = 5 * e^{-0.0038 * IRI}$$

The Cracking Rating is a measurement of the amount of surface cracking based on a field-measured area of 1,000 square feet that serves as a sample for each mile. To facilitate the calculation of the

index, the Cracking Rating was converted to a Pavement Distress Index (PDI) using the following equation:

$$PDI = 5 - (0.345 * C^{0.66})$$

Both the PSR and PDI use a 0 to 5 scale with 0 representing the lowest performance and 5 representing the highest performance. The performance thresholds for interstates and non-interstates shown in the tables below were used for the PSR and PDI.

Performance Level for Interstates	IRI (PSR)	Cracking (PDI)
Good	<75 (>3.75)	<7 (>3.75)
Fair	75 - 117 (3.20 - 3.75)	7 - 12 (3.22 - 3.75)
Poor	>117 (<3.20)	>12 (<3.22)

Performance Level for Non-Interstates	IRI (PSR)	Cracking (PDI)
Good	<94 (>3.5)	<9 (>3.5)
Fair	94 - 142 (2.9 - 3.5)	9 - 15 (2.9 - 3.5)
Poor	>142 (<2.9)	>15 (<2.9)

The PSR and PDI are calculated for each 1-mile section of roadway. If PSR or PDI falls into a poor rating (<3.2 for interstates, for example) for a 1-mile section, then the score for that 1-mile section is entirely (100%) based on the lower score (either PSR or PDI). If neither PSR or PDI fall into a poor rating for a 1-mile section, then the score for that 1-mile section is based on a combination of the lower rating (70% weight) and the higher rating (30% weight). The result is a score between 0 and 5 for each direction of travel of each mile of roadway based on a combination of both the PSR and the PDI.

The project corridor has been divided into segments. The Pavement Index for each segment is a weighted average of the directional ratings based on the number of travel lanes. Therefore, the condition of a section with more travel lanes will have a greater influence on the resulting segment Pavement Index than a section with fewer travel lanes.

Secondary Pavement Measures

Three secondary measures are evaluated:

- Directional Pavement Serviceability
- Pavement Failure
- Pavement Hot Spots

Directional Pavement Serviceability: Similar to the Pavement Index, the Directional Pavement Serviceability is calculated as a weighted average (based on number of lanes) for each segment. However, this rating only utilizes the PSR and is calculated separately for each direction of travel. The PSR uses a 0 to 5 scale with 0 representing the lowest performance and 5 representing the highest performance.

Pavement Failure: The percentage of pavement area rated above the failure thresholds for IRI or Cracking is calculated for each segment. In addition, the Standard score (z-score) is calculated for each segment.

The Standard score (z-score) is the number of standard deviations above or below the mean. Therefore, a Standard score between -0.5 and +0.5 is “average”, less than -0.5 is lower (better) than average, and higher than +0.5 is above (worse) than average.

Pavement Hot Spots: The Pavement Index map identifies locations that have an IRI rating or Cracking rating that fall above the failure threshold as identified by ADOT Pavement Group. For interstates, an IRI rating above 105 or a Cracking rating above 15 will be used as the thresholds which are slightly different than the ratings shown previously. For non-interstates, an IRI rating above 142 or a Cracking rating above 15 will be used as the thresholds.

Scoring

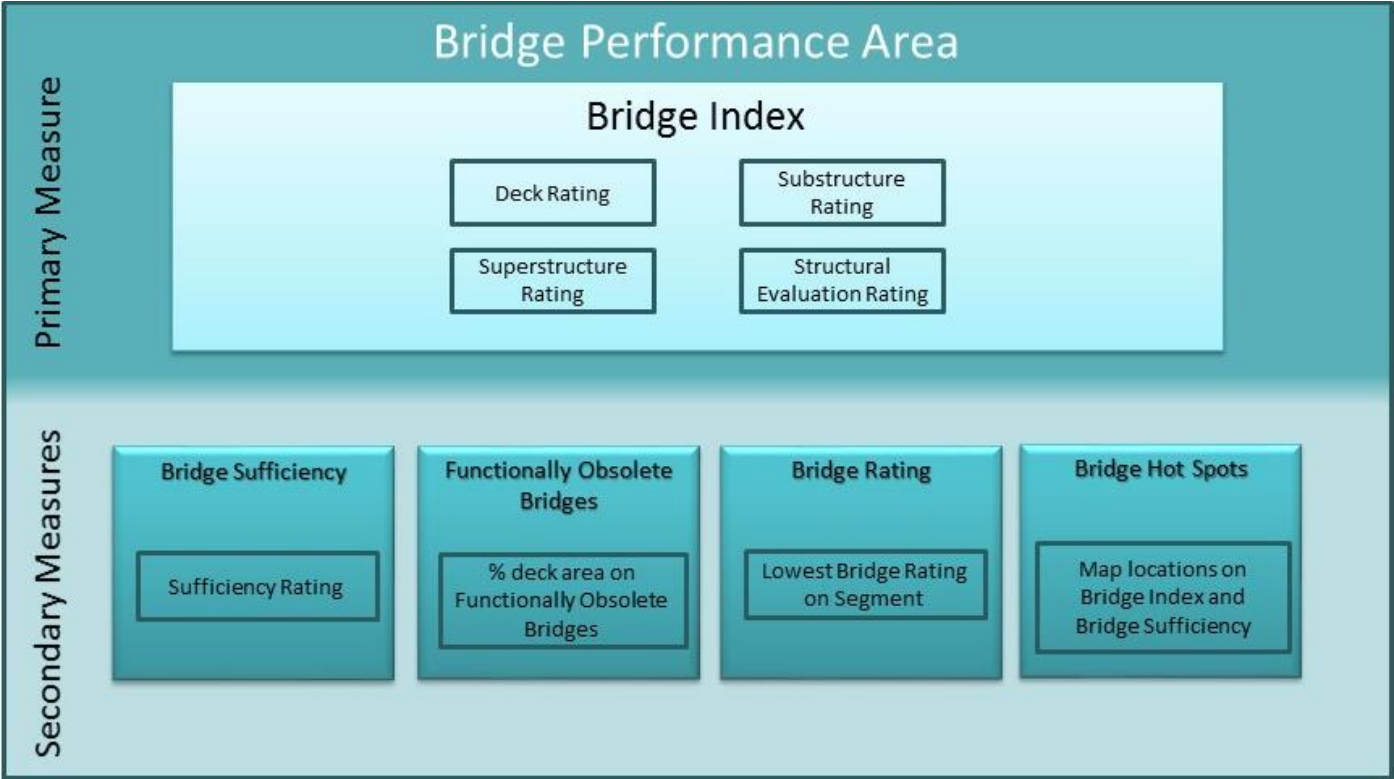
Performance Level	Pavement Index	
	Interstates	Non-Interstates
Good	>3.75	>3.5
Fair	3.2 - 3.75	2.9 - 3.5
Poor	<3.2	<2.9

Performance Level	Directional Pavement Serviceability	
	Interstates	Non-Interstates
Good	>3.75	>3.5
Fair	3.2 - 3.75	2.9 - 3.5
Poor	<3.2	<2.9

Performance Level	% Pavement Failure
Good	< 5%
Fair	5% – 20%
Poor	>20%

Bridge Performance Area Calculation Methodologies

This section summarizes the approach for developing the primary and secondary performance measures in the Bridge performance area as shown in the following graphic:



This performance area is used to evaluate mainline bridges. Bridges on ramps (that do not cross the mainline), frontage roads, etc. should not be included in the evaluation. Basically, any bridge that carries mainline traffic or carries traffic over the mainline should be included and bridges that do not carry mainline traffic, run parallel to the mainline (frontage roads), or do not cross the mainline should not be included.

Primary Bridge Index

The Bridge Index is calculated based on the use of four bridge condition ratings from the ADOT Bridge Database, also known as the Arizona Bridge Information and Storage System (ABISS). The four ratings are the Deck Rating, Substructure Rating, Superstructure Rating, and Structural Evaluation Rating. The calculation of the Bridge Index uses the lowest of these four ratings.

Each of the four condition ratings use a 0 to 9 scale with 0 representing the lowest performance and 9 representing the highest performance.

The project corridor has been divided into segments and the bridges are grouped together according to the segment definitions. In order to report the Bridge Index for each corridor segment, the Bridge Index for each segment is a weighted average based on the deck area for each bridge. Therefore,

the condition of a larger bridge will have a greater influence on the resulting segment Bridge Index than a smaller bridge.

Secondary Bridge Measures

Four secondary measures will be evaluated:

- Bridge Sufficiency
- Functionally Obsolete Bridges
- Bridge Rating
- Bridge Hot Spots

Bridge Sufficiency: Similar to the Bridge Index, the Bridge Sufficiency rating is calculated as a weighted average (based on deck area) for each segment. The Bridge Sufficiency rating is a scale of 0 to 100 with 0 representing the lowest performance and 100 representing the highest performance. A rating of 80 or above represents “good” performance, a rating between 50 and 80 represents “fair” performance, and a rating below 50 represents “poor” performance.

Functionally Obsolete Bridges: The percentage of total deck area in a segment that is on functionally obsolete bridges is calculated for each segment. The deck area for each bridge within each segment that has been identified as functionally obsolete is totaled and divided by the total deck area for the segment to calculate the percentage of deck area on functionally obsolete bridges for each segment.

The thresholds for this performance measure are determined based on the Standard score (z-score). The Standard score (z-score) is the number of standard deviations above or below the mean. Therefore, a Standard score between -0.5 and +0.5 is “average”, less than -0.5 is lower (better) than average, and higher than +0.5 is above (worse) average.

Bridge Rating: The Bridge Rating simply identifies the lowest bridge rating on each segment. This performance measure is not an average and therefore is not weighted based on the deck area. The Bridge Index identifies the lowest rating for each bridge, as described above. Each of the four condition ratings use a 0 to 9 scale with 0 representing the lowest performance and 9 representing the highest performance.

Bridge Hot Spots: The Bridge Index map identifies individual bridge locations that are identified as hot spots. Hot spots are bridges that have a single rating of 4 in any of the four ratings, or multiple ratings of 5 in the deck, substructure or superstructure ratings.

Scoring:

Performance Level	Bridge Index
Good	>6.5
Fair	5.0-6.5
Poor	<5.0

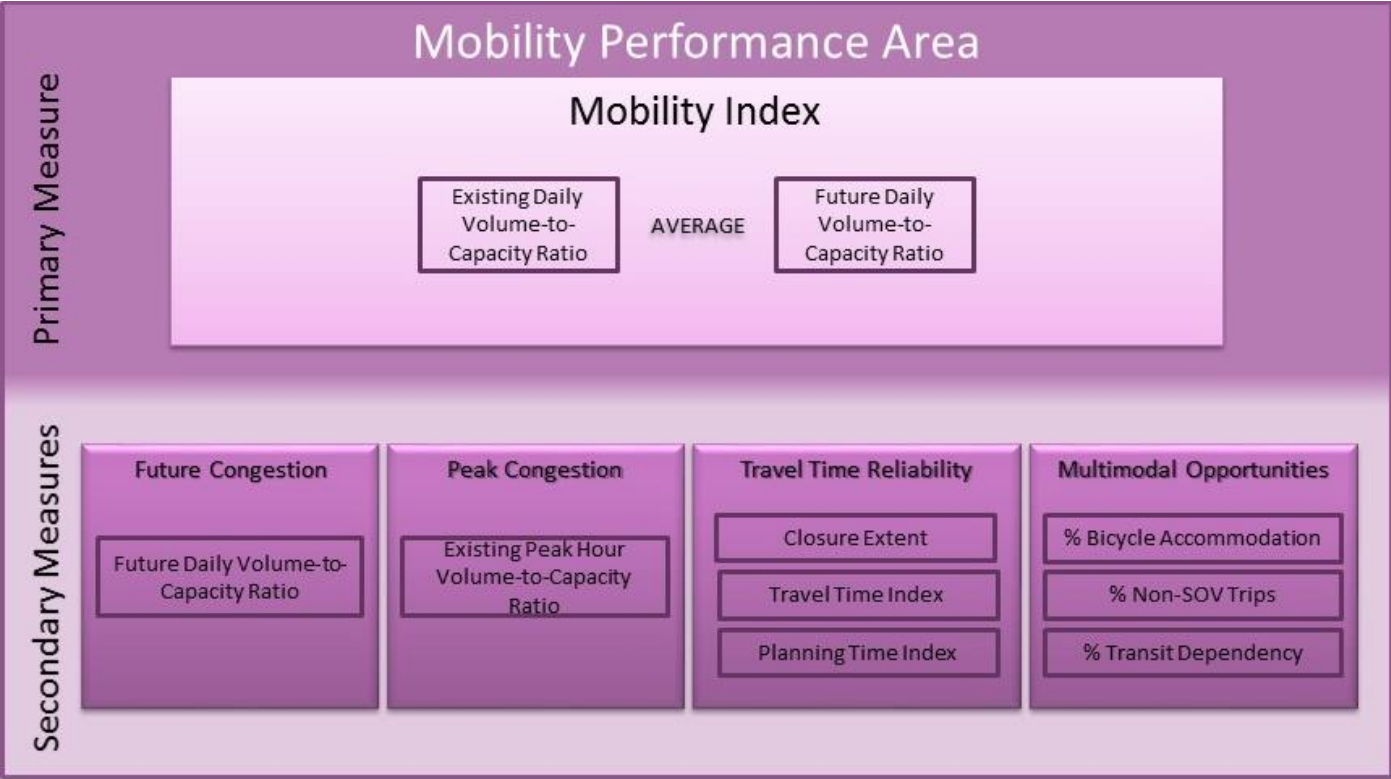
Performance Level	Sufficiency Rating
Good	>80
Fair	50-80
Poor	<50

Performance Level	Bridge Rating
Good	>6
Fair	5-6
Poor	<5

Performance Level	% Functionally Obsolete
Good	< 12%
Fair	12%-40%
Poor	>40%

Mobility Performance Area Calculation Methodologies

This section summarizes the approach for developing the primary and secondary performance measures in the Mobility performance area as shown in the following graphic:



Primary Mobility Index

The primary Mobility Index is an average of the existing daily volume-to-capacity (V/C) ratio and the future daily V/C ratio for each segment of the corridor.

Existing Daily V/C: The existing daily V/C ratio for each segment is calculated by dividing the 2014 Annual Average Daily Traffic (AADT) volume for each segment by the total Level of Service (LOS) E capacity volume for that segment

The capacity is calculated using the HERS Procedures for Estimating Highway Capacity¹. The HERS procedure incorporates HCM 2010 methodologies. The methodology includes capacity estimation procedures for multiple facility types including freeways, rural two-lane highways, multilane highways, and signalized and non-signalized urban sections.

The segment capacity is defined as a function of the number of mainline lanes, shoulder width, interrupted or uninterrupted flow facilities, terrain type, percent of truck traffic, and the designated urban or rural environment.

The AADT for each segment is calculated by applying a weighted average across the length of the segment based on the individual 24-hour volumes and distances associated with each HPMS count station within each segment.

The following example equation is used to determine the weighted average of a segment with two HPMS count locations within the corridor

$$\frac{((HPMS\ 1\ Distance \times HPMS\ 1\ Volume) + (HPMS\ 2\ Distance \times HPMS\ 2\ Volume))}{Total\ Segment\ Length}$$

For specific details regarding the HERS methodology used, refer to the *Procedures for Estimating Highway Capacity, draft Technical Memorandum*.

Future Daily V/C: The future daily V/C ratio for each segment is calculated by dividing the 2035 AADT volume for each segment by the 2014 LOS E capacity. The capacity volume used in this calculation is the same as is utilized in the existing daily V/C equation.

The future AADT daily volumes are generated by applying an average annual compound growth rate (ACGR) to each 2014 AADT segment volume. The following equation is used to apply the average annual compound growth rate:

$$2035\ AADT = 2014\ AADT \times ((1+ACGR)^{(2035-2014)})$$

The ACGR for each segment is defined by comparing the total volumes in the 2010 Arizona Travel Demand Model (AZTDM2) to the 2035 AZTDM2 traffic volumes at each existing HPMS count station location throughout the corridor. Each 2010 and 2035 segment volume is defined using the same weighted average equation described in the *Existing Daily V/C* section above and then summing the directional volumes for each location. The following equation is used to determine the ACGR for each segment:

$$ACGR = ((2035\ Volume/2010\ Volume)^{(1/(2035-2010))})-1$$

Secondary Mobility Measures

Four secondary measures are evaluated:

- Future Congestion
- Peak Congestion
- Travel Time Reliability

¹ HERS Support – 2011, Task 6: Procedures for Estimating Highway Capacity, draft Technical Memorandum. Cambridge Systematics. Prepared for the Federal Highway Administration. March 2013.

- Closure Extent
- Directional Travel Time Index
- Directional Planning Time Index
- Multimodal Opportunities
 - % Bicycle Accommodation
 - % Non-Single Occupancy Vehicle (SOV) Trips
 - % Transit Dependency

Future Congestion: The future daily V/C ratios for each segment in the corridor that are calculated and used in the Mobility Index as part of the overall average between Existing Daily V/C and Future Daily V/C are applied independently as a secondary measure. The methods to calculate the Future Daily V/C can be referenced in the Mobility Index section.

Peak Congestion: Peak Congestion has been defined as the peak hour V/C ratio in both directions of the corridor. The peak hour V/C ratio is calculated using the HERS method as described previously. The peak hour volume utilizes the directional AADT for each segment, which is calculated by applying a weighted average across the length of the segment based on the individual directional 24-hour volumes and distances associated with each HPMS count station within each segment. The segment capacity is defined based on the characteristics of each segment including number of lanes, terrain type, and environment, similar to the 24-hour volumes using the HERS method.

Travel Time Reliability: Travel time reliability is a secondary measure that includes three indicators. The three indicators are the number of times a piece of a corridor is closed for any specific reason, the directional Travel Time Index (TTI), and the directional Planning Time Index (PTI).

Closure Extent: The number of times a roadway is closed is documented through the HCRS dataset. Closure Extent is defined as the average number of times a particular milepost of the corridor is closed per year per mile in a specific direction of travel. The weighted average of each occurrence takes into account the distance over which a specific occurrence spans.

Thresholds that determine levels of good, fair, and poor are based on the average number of closures per mile per year within each of the identified statewide significant corridors by ADOT. The thresholds shown at the end of this section represent statewide averages across those corridors.

Directional Travel Time and Planning Time Index: In terms of overall mobility, the TTI is the relationship of the mean peak period travel time in a specific section of the corridor to the free-flow travel time in the same location. The PTI is the relationship of the 95th percentile highest travel time to the free-flow travel time (based on the posted speed limit) in a specific section of the corridor. The TTI and PTI can be converted into speed-based indices by recognizing that speed is equal to distance traveled divided by travel time. The inverse relationship between travel time and speed means that the 95th percentile highest travel time corresponds to the 5th percentile lowest speed.

Using HERE data provided by ADOT, four time periods for each data point were collected throughout the day (AM peak, mid-day, PM peak, and off-peak). Using the mean speeds and 5th percentile lowest mean speeds collected over 2014 for these time periods for each data location, four TTI and PTI calculations were made using the following formulas:

$$TTI = \text{Posted Speed Limit} / \text{Mean Peak Hour Speed}$$

$$PTI = \text{Posted Speed Limit} / 5^{\text{th}} \text{ Percentile Lowest Speed}$$

The highest value of the four time periods calculation is defined as the TTI for that data point. The average TTI is calculated within each segment based on the number of data points collected. The value of the average TTI across each entry is used as the TTI for each respective segment within the corridor.

Multimodal Opportunities: Three multimodal opportunity indicators reflect the characteristics of the corridor that promote alternate modes to a single occupancy vehicle (SOV) for trips along the corridor. The three indicators include the percent bicycle accommodation, non-SOV trips, and transit dependency along the corridor.

Percent Bicycle Accommodation: For this secondary performance evaluation, outside shoulder widths are evaluated considering the roadway's context and conditions. This requires use of the roadway data that includes right shoulder widths, shoulder surface types, and speed limits, all of which are available in the following ADOT geographic information system (GIS) data sets:

- Right Shoulder Widths
- Left Shoulder Widths (for undivided roadways)
- Shoulder Surface Type (Both Left/Right)
- Speed Limit

Additionally, each segment's average AADT, estimated earlier in the Mobility performance area methodology, is used for the criteria to determine if the existing shoulder width meets the effective width.

The criteria for screening if a shoulder segment meets the recommended width criteria are as followed:

- (1) If AADT <= 1500 OR Speed Limit <= 25 miles per hour (mph):
The segment's general purpose lane can be shared with bicyclists (no effective shoulder width required)
- (2) If AADT > 1500 AND Speed Limit between (25 - 50 mph) AND Pavement Surface is Paved:
Effective shoulder width required is 4 feet or greater
- (3) If AADT > 1500 AND Speed Limit >= 50 mph and Pavement Surface is Paved:
Effective shoulder width required is 6 feet or greater

The summation of the length of the shoulder sections that meet the defined effective width criteria, based on criteria above, is divided by the segment's total length to estimate the percent of the segment that accommodates bicycles as illustrated at the end of this section. If shoulder data is not available or appears erroneous, field measurements can substitute for the shoulder data.

Percent Non-SOV Trips: The percentage of non-SOV trips over distances less than 50 miles gives an indication of travel patterns along a section of the corridor that could benefit from additional multimodal options in the future.

Thresholds that determine levels of good, fair, and poor are based on the percent non-SOV trips within each of the identified statewide significant corridors by ADOT. The thresholds shown at the end of this section represent statewide averages across those corridors.

Percent Transit Dependency: 2008-2012 U.S. Census American Community Survey tract and state level geographic data and attributes from the tables B08201 (Number of Vehicles Available by Household Size) and B17001 (Population in Poverty within the Last 12 Months) were downloaded with margins of error included from the Census data retrieval application Data Ferret. Population ranges for each tract were determined by adding and subtracting the margin of error to each estimate in excel. The tract level attribute data was then joined to geographic tract data in GIS. Only tracts within a one mile buffer of each corridor are considered for this evaluation.

Tracts that have a statistically significantly larger number of either people in poverty or households with only one or no vehicles available than the state average are considered potentially transit dependent.

Example: The state average for zero or one vehicles households (HHs) is between 44.1% and 45.0%. Tracts which have the lower bound of their range above the upper bound of the state range have a greater percentage of zero/one vehicle HHs than the state average. Tracts that have their upper bound beneath the lower bound of the state range have a lesser percentage of zero/one vehicles HHs than the state average. All other tracts that have one of their bounds overlapping with the state average cannot be considered statistically significantly different because there is a chance the value is actually the same.

In addition to transit dependency, the following attributes are added to the Multimodal Opportunities map based on available data.

- Shoulder width throughout the corridor based on 'Shoulder Width' GIS dataset provided by ADOT
- Intercity bus routes
- Multiuse paths within the corridor right-of-way, if applicable

Scoring:

Volume-to-Capacity Ratios		
Urban and Fringe Urban		
Good - LOS A-C	V/C ≤ 0.71	*Note - ADOT Roadway Design Standards indicate Urban and Fringe Urban roadways should be designed to level of service C or better
Fair - LOS D	V/C > 0.71 & ≤ 0.89	
Poor - LOS E or less	V/C > 0.89	
Rural		
Good - LOS A-B	V/C ≤ 0.56	*Note - ADOT Roadway Design Standards indicate Rural roadways should be designed to level of service B or better
Fair - LOS C	V/C > 0.56 & ≤ 0.76	
Poor - LOS D or less	V/C > 0.76	

Performance Level	Closure Extent
Good	≤ 0.22
Fair	> 0.22 & ≤ 0.62
Poor	V/C > 0.62

Performance Level	TTI on Uninterrupted Flow Facilities
Good	< 1.15
Fair	≥ 1.15 & < 1.33
Poor	≥ 1.33

Performance Level	TTI on Interrupted Flow Facilities
Good	< 1.30
Fair	≥ 1.30 & < 1.2.00
Poor	≥ 2.00

Performance Level	PTI on Uninterrupted Flow Facilities
Good	< 1.30
Fair	≥ 1.30 & < 1.50
Poor	≥ 1.50

Performance Level	PTI Interrupted Flow Facilities
Good	< 3.00
Fair	≥ 3.00 & < 6.00
Poor	≥ 6.00

Performance Level	Percent Bicycle Accommodation
Good	$\geq 90\%$
Fair	$> 60\% \ \& \ \leq 90\%$
Poor	$< 60\%$

Performance Level	Percent Non-SOV Trips
Good	$\geq 17\%$
Fair	$> 11\% \ \& \ \leq 17\%$
Poor	$< 11\%$

Performance Level	Percent Transit Dependency
Good	Tracts with both zero and one vehicle household population in poverty percentages below the statewide average
Fair	Tracts with either zero and one vehicle household or population in poverty percentages below the statewide average
Poor	Tracts with both zero and one vehicle household and population in poverty percentages above the statewide average

Safety Performance Area Calculation Methodologies

This section summarizes the approach for developing the primary and secondary performance measures in the Safety performance area as shown in the following graphic:



Primary Safety Index

The Safety Index is a safety performance measure based on the bi-directional (i.e., both directions combined) frequency and rate of fatal and incapacitating injury crashes, the relative cost of those types of crashes, and crash occurrences on similar roadways in Arizona. According to ADOT’s 2010 Highway Safety Improvement Program Manual, fatal crashes have an estimated cost that is 14.5 times the estimated cost of incapacitating injury crashes (\$5.8 million compared to \$400,000).

The Combined Safety Score (CSS) is an interim measure that combines fatal and incapacitating injury crashes into a single value. The CSS is calculated using the following generalized formula:

$$CSS = 14.5 * (Normalized\ Fatal\ Crash\ Rate + Frequency) + (Normalized\ Incapacitating\ Injury\ Crash\ Rate + Frequency)$$

Because crashes vary depending on the operating environment of a particular roadway, statewide CSS values were developed for similar operating environments defined by functional classification, urban vs. rural setting, number of travel lanes, and traffic volumes. To determine the Safety Index of a particular segment, the segment CSS is compared to the average statewide CSS for the similar statewide operating environment.

The Safety Index is calculated using the following formula:

$$Safety\ Index = Segment\ CSS / Statewide\ Similar\ Operating\ Environment\ CSS$$

The average annual Safety Index for a segment is compared to the statewide similar operating environment annual average, with one standard deviation from the statewide average forming the scale break points.

The more a particular segment’s Safety Index value is below the statewide similar operating environment average, the better the safety performance is for that particular segment as a lower value represents fewer crashes.

Scoring:

The scale for rating the Safety Index depends on the operating environments selected, as shown in the table below.

Similar Operating Environment	Safety Index (Overall & Directional)	
	Lower Limit of Average*	Upper Limit of Average*
2 or 3 Lane Undivided Highway	0.94	1.06
2 or 3 or 4 Lane Divided Highway	0.77	1.23
4 or 5 Lane Undivided Highway	0.80	1.20
6 Lane Highway	0.56	1.44
Rural 4 Lane Freeway with Daily Volume < 25,000	0.73	1.27
Rural 4 Lane Freeway with Daily Volume > 25,000	0.68	1.32
Urban 4 Lane Freeway	0.79	1.21
Urban or Rural 6 Lane Freeway	0.82	1.18
Urban > 6 Lane Freeway	0.80	1.20

* Lower/upper limit of Average calculated as one standard deviation below/above the Mean

Some corridor segments may have a very low number of total fatal and incapacitating injury crashes. Low crash frequencies (i.e., a small sample size) can translate into performance ratings that can be unstable. In some cases, a change in crash frequency of one crash (one additional crash or one less crash) could result in a change in segment performance of two levels. To avoid reliance on performance ratings where small changes in crash frequency result in large changes in performance, the following two criteria were developed to identify segments with “insufficient data” for assessing performance for the Safety Index. Both of these criteria must be met for a segment to have “insufficient data” to reliably rate the Safety Index performance:

- If the crash sample size (total fatal plus incapacitating injury crashes) for a given segment is less than five crashes over the five-year analysis period; AND

- If a change in one crash results in a change in segment performance by two levels (i.e., a change from below average to above average performance or a change from above average to below average frequency), the segment has “insufficient data” and Safety Index performance ratings are unreliable.

Secondary Safety Measures

The Safety performance area has four secondary measures related to fatal and incapacitating injury crashes:

- Directional Safety Index
- Strategic Highway Safety Plan (SHSP) Behavior Emphasis Areas
- Crash Unit Types
- Safety Hot Spots

Directional Safety Index: The Direction Safety Index shares the same calculation procedure and thresholds as the Safety Index. However, the measure is based on the directional frequency and rate of fatal and incapacitating injury crashes.

Similar to the Safety Index, the segment CSS is compared to the average statewide CSS for the similar statewide operating environment. The Directional Safety Index follows the lead of the Safety Index in terms of “insufficient data” status. If the Safety Index meets both criteria for “insufficient data”, the Directional Safety Index should also be changed to “insufficient data”. If the Safety Index does not meet both criteria for “insufficient data”, the Directional Safety Index would also not change to say “insufficient data”

SHSP Behavior Emphasis Areas: ADOT’s 2014 SHSP identifies several emphasis areas for reducing fatal and incapacitating injury crashes. The top five SHSP emphasis areas relate to the following driver behaviors:

- Speeding and aggressive driving
- Impaired driving
- Lack of restraint usage
- Lack of motorcycle helmet usage
- Distracted driving

To develop a performance measure that reflects these five emphasis areas, the percentage of total fatal and incapacitating injury crashes that involves at least one of the emphasis area driver behaviors on a particular segment is compared to the statewide average percentage of crashes involving at least one of the emphasis area driver behaviors on roads with similar operating environments in a process similar to how the Safety Index is developed.

To increase the crash sample size for this performance measure, the five behavior emphasis areas are combined to identify fatal and incapacitating injury crashes that exhibit one or more of the behavior emphasis areas.

The SHSP behavior emphasis areas performance is calculated using the following formula:

$$\% \text{ Crashes Involving SHSP Behavior Emphasis Areas} = \frac{\text{Segment Crashes Involving SHSP Behavior Emphasis Areas}}{\text{Total Segment Crashes}}$$

The percentage of total crashes involving SHSP behavior emphasis areas for a segment is compared to the statewide percentages on roads with similar operating environments. One standard deviation from the statewide average percentage forms the scale break points.

When assessing the performance of the SHSP behavior emphasis areas, the more the frequency of crashes involving SHSP behavior emphasis areas is below the statewide average implies better levels of segment performance. Thus, lower values are better, similar to the Safety Index.

Scoring:

The scale for rating the SHSP behavior emphasis areas performance depends on the crash history on similar statewide operating environments, as shown in the table below:

Similar Operating Environment	Crashes in SHSP Top 5 Emphasis Areas	
	Lower Limit of Average*	Upper Limit of Average*
2 or 3 Lane Undivided Highway	51.2%	57.5%
2 or 3 or 4 Lane Divided Highway	44.4%	54.4%
4 or 5 Lane Undivided Highway	42.4%	51.1%
6 Lane Highway	35.3%	46.5%
Rural 4 Lane Freeway with Daily Volume < 25,000	42.8%	52.9%
Rural 4 Lane Freeway with Daily Volume > 25,000	40.8%	57.1%
Urban 4 Lane Freeway	49.1%	59.4%
Urban or Rural 6 Lane Freeway	33.5%	57.2%
Urban > 6 Lane Freeway	42.6%	54.8%

* Lower/upper limit of Average calculated as one standard deviation below/above the Mean

The SHSP behavior emphasis areas secondary safety performance measure for the Safety performance area includes proportions of specific types of crashes within the total fatal and incapacitating injury crash frequencies. This more detailed categorization of fatal and incapacitating injury crashes can result in low crash frequencies (i.e., a small sample size) that translate into performance ratings that can be unstable. In some cases, a change in crash frequency of one crash (one additional crash or one less crash) could result in a change in segment performance of two levels. To avoid reliance on performance ratings where small changes in crash frequency result in large changes in performance, the following criteria were developed to identify segments with “insufficient data” for assessing performance for the SHSP behavior emphasis areas secondary

safety performance measure. If any of these criteria are met for a segment, that segment has “insufficient data” to reliably rate the SHSP behavior emphasis areas performance:

- If the crash sample size (total fatal plus incapacitating injury crashes) for a given segment is less than five crashes over the five-year analysis period, the segment has “insufficient data” and performance ratings are unreliable. OR
- If a change in one crash results in a change in segment performance by two levels (i.e., a change from below average to above average performance or a change from above average to below average frequency), the segment has “insufficient data” and performance ratings are unreliable. OR
- If the corridor average segment crash frequency for the SHSP behavior emphasis areas performance measure is less than two crashes over the five-year analysis period, the entire SHSP behavior emphasis areas performance measure has “insufficient data” and performance ratings are unreliable.

Crash Unit Type Emphasis Areas: ADOT’s SHSP also identifies emphasis areas that relate to the following “unit-involved” crashes:

- Heavy vehicle (trucks)-involved crashes
- Motorcycle-involved crashes
- Non-motorized traveler (pedestrians and bicyclists)-involved crashes

To develop a performance measure that reflects the aforementioned crash unit type emphasis areas, the percentage of total fatal and incapacitating injury crashes that involves a given crash unit type emphasis area on a particular segment is compared to the statewide average percentage of crashes involving that same crash unit type emphasis area on roads with similar operating environments in a process similar to how the Safety Index is developed.

The SHSP crash unit type emphasis areas performance is calculated using the following formula:

$$\% \text{ Crashes Involving Crash Unit Type} = \frac{\text{Segment Crashes Involving Crash Unit Type}}{\text{Total Segment Crashes}}$$

The percentage of total crashes involving crash unit types for a segment is compared to the statewide percentages on roads with similar operating environments. One standard deviation from the statewide average percentage forms the scale break points.

When assessing the performance of the crash unit types, the more the frequency of crashes involving crash unit types is below the statewide average implies better levels of segment performance. Thus, lower values are better, similar to the Safety Index. The scale for rating the unit-involved crash performance depends on the crash history on similar statewide operating environments, as shown in the following tables.

Scoring:

Similar Operating Environment	Crashes Involving Trucks	
	Lower Limit of Average*	Upper Limit of Average*
2 or 3 Lane Undivided Highway	5.2%	7.1%
2 or 3 or 4 Lane Divided Highway	3.5%	7.3%
4 or 5 Lane Undivided Highway	6.1%	9.6%
6 Lane Highway	0.3%	8.7%
Rural 4 Lane Freeway with Daily Volume < 25,000	13.2%	17.0%
Rural 4 Lane Freeway with Daily Volume > 25,000	7.2%	12.9%
Urban 4 Lane Freeway	6.8%	10.9%
Urban or Rural 6 Lane Freeway	6.2%	11.0%
Urban > 6 Lane Freeway	2.5%	6.0%

* Lower/upper limit of Average calculated as one standard deviation below/above the Mean

Similar Operating Environment	Crashes Involving Motorcycles	
	Lower Limit of Average*	Upper Limit of Average*
2 or 3 Lane Undivided Highway	18.5%	26.5%
2 or 3 or 4 Lane Divided Highway	16.3%	26.3%
4 or 5 Lane Undivided Highway	6.4%	9.4%
6 Lane Highway	0.0%	20.0%
Rural 4 Lane Freeway with Daily Volume < 25,000	5.0%	8.5%
Rural 4 Lane Freeway with Daily Volume > 25,000	7.7%	17.1%
Urban 4 Lane Freeway	9.3%	11.5%
Urban or Rural 6 Lane Freeway	6.7%	12.9%
Urban > 6 Lane Freeway	12.6%	20.5%

* Lower/upper limit of Average calculated as one standard deviation below/above the Mean

Similar Operating Environment	Crashes Involving Non-Motorized Travelers	
	Lower Limit of Average*	Upper Limit of Average*

2 or 3 Lane Undivided Highway	2.2%	4.2%
2 or 3 or 4 Lane Divided Highway	2.4%	4.5%
4 or 5 Lane Undivided Highway	4.7%	7.9%
6 Lane Highway	8.4%	17.4%
Rural 4 Lane Freeway with Daily Volume < 25,000	1.7%	2.5%
Rural 4 Lane Freeway with Daily Volume > 25,000	0.0%	0.0%
Urban 4 Lane Freeway	4.8%	10.3%
Urban or Rural 6 Lane Freeway	0.9%	6.7%
Urban > 6 Lane Freeway	0.5%	1.5%

* Lower/upper limit of Average calculated as one standard deviation below/above the Mean

The crash unit types have the same “insufficient data” criteria as the SHSP behavior emphasis areas.

Safety Hot Spots: A hot spot analysis was conducted that identified abnormally high concentrations of fatal and incapacitating injury crashes along the study corridor by direction of travel. The identification of crash concentrations involves a GIS-based function known as “kernel density analysis”. This measure is mapped for graphical display purposes with the Directional Safety Index but is not included in the Safety performance area rating calculations.

Freight Performance Area Calculation Methodologies

This section summarizes the approach for developing the primary and secondary performance measures in the Freight performance area as shown in the following graphic:



Primary Freight Index

The Freight Index is a reliability performance measure based on the planning time index for truck travel. The industry standard definition for the Truck Planning Time Index (TPTI) is the ratio of total travel time needed for 95% on-time arrival to free-flow travel time. The TPTI reflects the extra buffer time needed for on-time delivery while accounting for non-recurring delay. Non-recurring delay refers to unexpected or abnormal delay due to closures or restrictions resulting from circumstances such as crashes, inclement weather, and construction activities.

The TPTI can be converted into a speed-based index by recognizing that speed is equal to distance traveled divided by travel time. The inverse relationship between travel time and speed means that the 95th percentile highest travel time corresponds to the 5th percentile lowest speed. The speed-based TPTI is calculated using the following formula:

$$TPTI = \text{Free-Flow Truck Speed} / \text{Observed 5}^{th} \text{ Percentile Lowest Truck Speed}$$

Observed 5th percentile lowest truck speeds are available in the 2014 American Digital Cartography, Inc. HERE (formerly NAVTEQ) database to which ADOT has access. The free-flow truck speed is assumed to be 65 miles per hour or the posted speed, whichever is less. This upper limit of 65 mph

accounts for governors that trucks often have that restrict truck speeds to no more than 65 mph, even when the speed limit may be higher.

For each corridor segment, the TPTI is calculated for each direction of travel and then averaged to create a bi-directional TPTI. When assessing performance using TPTI, the higher the TPTI value is above 1.0, the more buffer time is needed to ensure on-time delivery.

The Freight Index is calculated using the following formula to invert the overall TPTI:

$$\text{Freight Index} = 1 / \text{Bi-directional TPTI}$$

Inversion of the TPTI allows the Freight Index to have a scale where the higher the value, the better the performance, which is similar to the directionality of the scales of most of the other primary measures. This Freight Index scale is based on inverted versions of TPTI scales created previously by ADOT. The scale for rating the Freight Index differs between uninterrupted and interrupted flow facilities.

Secondary Freight Measures

The Freight performance area includes five secondary measures that provide an in-depth evaluation of the different characteristics of freight performance:

- Recurring Delay (Directional TTTI)
- Non-Recurring Delay (Directional TPTI)
- Closure Duration
- Bridge Vertical Clearance
- Bridge Vertical Clearance Hot Spots

Recurring Delay (Directional TTTI): The performance measure for recurring delay is the Directional Truck Travel Time Index (TTTI). The industry standard definition for TTTI is the ratio of average peak period travel time to free-flow travel time. The TTTI reflects the extra time spent in traffic during peak times due to recurring delay. Recurring delay refers to expected or normal delay due to roadway capacity constraints or traffic control devices.

Similar to the TPTI, the TTTI can be converted into a speed-based index by recognizing that speed is equal to distance traveled divided by travel time. The speed-based TTTI can be calculated using the following formula:

$$TTTI = \text{Free-Flow Truck Speed} / \text{Observed Average Peak Period Truck Speed}$$

Observed average peak period truck speeds are available in the 2014 American Digital Cartography, Inc. HERE (formerly NAVTEQ) database to which ADOT has access. The free-flow truck speed is assumed to be 65 mph or the posted speed, whichever is less.

For each corridor segment, the TTTI is calculated for each direction of travel. With the TTTI, the higher the TTTI value is above 1.0, the more time is spent in traffic during peak times. TTTI values are generally lower than TPTI values. The Directional TTTI scale is based on TTTI scales created previously by ADOT.

Non-Recurring Delay (Directional TPTI): The performance measure for non-recurring delay is the Directional TPTI. Directional TPTI is calculated as described previously as an interim step in the development of the Freight Index.

For each corridor segment, the TPTI is calculated for each direction of travel. With the TPTI, the higher the TPTI value is above 1.0, the more buffer time is needed to ensure on-time delivery.

Closure Duration: This performance measure related to road closures is average roadway closure (i.e., full lane closure) duration time in minutes. There are three main components to full closures that affect reliability – frequency, duration, and extent. In the freight industry, closure duration is the most important component because trucks want to minimize travel time and delay.

Data on the frequency, duration, and extent of full roadway closures on the ADOT State Highway System is available for 2010-2014 in the HCRS database that is managed and updated by ADOT.

The average closure duration in a segment – in terms of the average time a milepost is closed per mile per year on a given segment – is calculated using the following formula:

$$\text{Closure Duration} = \text{Sum of Segment (Closure Clearance Time * Closure Extent)} / \text{Segment Length}$$

The segment closure duration time in minutes can then be compared to statewide averages for closure duration in minutes, with one-half standard deviation from the average forming the scale break points. The scale for rating closure duration in minutes is found at the end of this section.

Bridge Vertical Clearance: This performance measure uses the vertical clearance information from the ADOT Bridge Database to identify locations with low vertical clearance. The minimum vertical clearance for all underpass structures (i.e., structures under which mainline traffic passes) is determined for each segment.

Bridge Vertical Clearance Hot Spots: This performance measure related to truck restrictions is the locations, or hot spots, where bridge vertical clearance issues restrict truck travel. Sixteen feet three inches (16.25') is the minimum standard vertical clearance value for state highway bridges over travel lanes.

Locations with lower vertical clearance values than the minimum standard are categorized by the ADOT Intermodal Transportation Department Engineering Permits Section as either locations where ramps exist that allow the restriction to be avoided or locations where ramps do not exist and the restriction cannot be avoided. The locations with vertical clearances below the minimum standard that cannot be ramped around are considered hot spots. This measure is mapped for graphical display purposes with the bridge vertical clearance map but is not included in the Freight performance area rating calculations.

Scoring:

Performance Level	Freight Index	
	Uninterrupted Flow Facilities	Interrupted Flow Facilities
Good	> 0.77	> 0.33
Fair	0.67 – 0.77	0.17 – 0.33
Poor	< 0.67	< 0.17

Performance Level	TTTI	
	Uninterrupted Flow Facilities	Interrupted Flow Facilities
Good	< 1.15	< 1.30
Fair	1.15 – 1.33	1.30 – 2.00
Poor	> 1.33	> 2.00

Performance Level	TPTI	
	Uninterrupted Flow Facilities	Interrupted Flow Facilities
Good	< 1.30	< 3.00
Fair	1.30 – 1.50	3.00 – 6.00
Poor	> 1.50	> 6.00

Performance Level	Closure Duration (minutes)
Good	< 44.18
Fair	44.18 – 124.86
Poor	> 124.86

Performance Level	Bridge Vertical Clearance
Good	> 16.5'
Fair	16.0' – 16.5'
Poor	< 16.0'

Appendix C: Performance Area Data

Pavement Performance Area Data

				EB			WB			EB		WB		Composite		Pavement Index	% Pavement Failure	
				# of Lanes	IRI	Cracking	# of Lanes	IRI	Cracking	PSR	PDI	PSR	PDI	EB	WB		EB	WB
Segment 260-1	Interstate?	No																
Milepost	305	to	306	4	114.09	2.00		-	-	3.24	4.5	-	-	3.61	#NUM!		0	0
Milepost	306	to	307	4	113.23	9.00		-	-	3.25	3.5	-	-	3.33	#NUM!		0	0
Milepost	307	to	308	4	98.09	80.00		-	-	3.44	0.0	-	-	0.00	#NUM!		4	0
Milepost	308	to	309	4	84.58	20.00		-	-	3.63	2.5	-	-	2.51	#NUM!		4	0
Milepost	309	to	310	4	94.90	65.00		-	-	3.49	0.0	-	-	0.00	#NUM!		4	0
		Total		20			0											12
		Weighted Average								3.41	2.10	#DIV/0!	#DIV/0!	1.89	#NUM!			
		Factor								1.00		1.00						
		Indicator Score								3.41		#DIV/0!						60.0%
		Pavement Index														1.89		
Segment 260-2	Interstate?	No																
Milepost	310	to	311	2	76.94	55.00		-	-	3.73	0.1	-	-	0.14	#NUM!		2	0
Milepost	311	to	312	2	49.16	1.00		-	-	4.15	4.7	-	-	4.30	#NUM!		0	0
Milepost	312	to	313	2	52.53	0.00		-	-	4.10	5.0	-	-	4.37	#NUM!		0	0
Milepost	313	to	314	2	54.75	5.00		-	-	4.06	4.0	-	-	4.02	#NUM!		0	0
Milepost	314	to	315	2	60.02	3.00		-	-	3.98	4.3	-	-	4.07	#NUM!		0	0
Milepost	315	to	316	2	47.96	2.00		-	-	4.17	4.5	-	-	4.25	#NUM!		0	0
Milepost	316	to	317	2	60.83	0.00		-	-	3.97	5.0	-	-	4.28	#NUM!		0	0
Milepost	317	to	318	2	57.47	4.00		-	-	4.02	4.1	-	-	4.05	#NUM!		0	0
Milepost	318	to	319	2	50.36	0.00		-	-	4.13	5.0	-	-	4.39	#NUM!		0	0
Milepost	319	to	320	2	50.25	7.00		-	-	4.13	3.8	-	-	3.87	#NUM!		0	0
Milepost	320	to	321	2	52.94	3.00		-	-	4.09	4.3	-	-	4.15	#NUM!		0	0
Milepost	321	to	322	2	52.88	3.00		-	-	4.09	4.3	-	-	4.15	#NUM!		0	0
Milepost	322	to	323	2	64.58	0.00		-	-	3.91	5.0	-	-	4.24	#NUM!		0	0
		Total		26			0											2
		Weighted Average								4.04	4.15	#DIV/0!	#DIV/0!	3.87	#NUM!			
		Factor								1.00		1.00						
		Indicator Score								4.04		#DIV/0!						7.7%
		Pavement Index														3.87		
Segment 260-3	Interstate?	No																
Milepost	323	to	324	2	59.37	0.00		-	-	3.99	5.0	-	-	4.29	#NUM!		0	0
Milepost	324	to	325	2	62.37	0.00		-	-	3.94	5.0	-	-	4.26	#NUM!		0	0
Milepost	325	to	326	2	62.34	0.00		-	-	3.95	5.0	-	-	4.26	#NUM!		0	0
Milepost	326	to	327	2	64.28	0.00		-	-	3.92	5.0	-	-	4.24	#NUM!		0	0
Milepost	327	to	328	2	62.38	0.00		-	-	3.94	5.0	-	-	4.26	#NUM!		0	0
Milepost	328	to	329	2	75.70	0.00		-	-	3.75	5.0	-	-	4.13	#NUM!		0	0
Milepost	329	to	330	2	55.14	0.00		-	-	4.05	5.0	-	-	4.34	#NUM!		0	0
Milepost	330	to	331	2	57.69	0.00		-	-	4.02	5.0	-	-	4.31	#NUM!		0	0
Milepost	331	to	332	2	68.45	1.00		-	-	3.85	4.7	-	-	4.09	#NUM!		0	0
Milepost	332	to	333	2	99.59	1.00		-	-	3.42	4.7	-	-	3.79	#NUM!		0	0
Milepost	333	to	334	2	92.74	7.00		-	-	3.51	3.8	-	-	3.59	#NUM!		0	0
Milepost	334	to	335	2	107.56	10.00		-	-	3.32	3.4	-	-	3.35	#NUM!		0	0
Milepost	335	to	336	2	93.31	8.00		-	-	3.51	3.6	-	-	3.55	#NUM!		0	0
Milepost	336	to	337	2	100.23	1.00		-	-	3.42	4.7	-	-	3.79	#NUM!		0	0
		Total		28			0											0
		Weighted Average								3.76	4.63	#DIV/0!	#DIV/0!	4.02	#NUM!			
		Factor								1.00		1.00						
		Indicator Score								3.76		#DIV/0!						0.0%
		Pavement Index														4.02		

				EB			WB			EB		WB		Composite		Pavement Index	% Pavement Failure	
				# of Lanes	IRI	Cracking	# of Lanes	IRI	Cracking	PSR	PDI	PSR	PDI	EB	WB		EB	WB
Segment 260/60-4		Interstate?		No														
SR 260	337	to	338	4	106.80	5.00		-	-	3.33	4.0	-	-	3.53	#NUM!		0	0
SR 260	338	to	339	4	131.90	8.00		-	-	3.03	3.6	-	-	3.21	#NUM!		0	0
SR 260	339	to	340	4	73.64	6.00		-	-	3.78	3.9	-	-	3.81	#NUM!		0	0
US 60	340	to	341	4	134.01	2.00		-	-	3.00	4.5	-	-	3.44	#NUM!		0	0
US 60	341	to	342	4	130.90	4.00		-	-	3.04	4.1	-	-	3.37	#NUM!		0	0
US 60	342	to	343	4	200.88	25.00		-	-	2.33	2.1	-	-	2.11	#NUM!		4	0
US 60	343	to	344	4	105.20	60.00		-	-	3.35	0.0	-	-	0.00	#NUM!		4	0
US 60	344	to	345	4	103.34	9.00		-	-	3.38	3.5	-	-	3.42	#NUM!		0	0
		Total		32			0											8
		Weighted Average								3.16	3.22	#DIV/0!	#DIV/0!	2.86	#NUM!			
		Factor								1.00		1.00						
		Indicator Score								3.16		#DIV/0!						25.0%
		Pavement Index														2.86		
Segment 260-5		Interstate?		No														
Milepost	341	to	342	4	0.00	4.00		-	-	5.00	4.1	-	-	4.40	#NUM!		0	0
Milepost	342	to	343	4	86.26	25.00		-	-	3.60	2.1	-	-	2.11	#NUM!		4	0
Milepost	343	to	344	4	64.95	12.00		-	-	3.91	3.2	-	-	3.43	#NUM!		0	0
Milepost	344	to	345	4	59.31	25.00		-	-	3.99	2.1	-	-	2.11	#NUM!		4	0
Milepost	345	to	346	4	68.58	0.00		-	-	3.85	5.0	-	-	4.20	#NUM!		0	0
Milepost	346	to	347	4	68.24	15.00		-	-	3.86	2.9	-	-	3.21	#NUM!		0	0
Milepost	347	to	348	4	63.81	6.00		-	-	3.92	3.9	-	-	3.89	#NUM!		0	0
Milepost	348	to	349	4	75.34	4.00		-	-	3.76	4.1	-	-	3.87	#NUM!		0	0
Milepost	349	to	350	4	83.68	2.00		-	-	3.64	4.5	-	-	3.88	#NUM!		0	0
Milepost	350	to	351	4	81.52	7.00		-	-	3.67	3.8	-	-	3.69	#NUM!		0	0
Milepost	351	to	352	4	69.79	20.00		-	-	3.84	2.5	-	-	2.51	#NUM!		4	0
Milepost	352	to	353	4	57.84	7.00		-	-	4.01	3.8	-	-	3.83	#NUM!		0	0
Milepost	353	to	354	4	94.02	2.00		-	-	3.50	4.5	-	-	3.79	#NUM!		0	0
Milepost	354	to	355	2	106.49	30.00	2	87.16	8.00	3.34	1.7	3.59	3.6	1.74	3.60		2	0
Milepost	355	to	356	2	91.28	0.00	2	68.06	0.00	3.53	5.0	3.86	5.0	3.97	4.20		0	0
Milepost	356	to	357	2	73.48	0.00	2	76.60	3.00	3.78	5.0	3.74	4.3	4.15	3.90		0	0
		Total		58			6											14
		Weighted Average								3.85	3.61	3.73	4.31	3.44	0.40			
		Factor								1.00		1.00						
		Indicator Score								3.85		3.73						21.9%
		Pavement Index														3.15		
Segment 60-6		Interstate?		No														
Milepost	345	to	346	2	73.60	7.00		-	-	3.78	3.8	-	-	3.76	#NUM!		0	0
Milepost	346	to	347	2	61.38	7.00		-	-	3.96	3.8	-	-	3.82	#NUM!		0	0
Milepost	347	to	348	2	84.11	1.00		-	-	3.63	4.7	-	-	3.94	#NUM!		0	0
Milepost	348	to	349	2	95.39	8.00		-	-	3.48	3.6	-	-	3.53	#NUM!		0	0
Milepost	349	to	350	2	79.79	6.00		-	-	3.69	3.9	-	-	3.75	#NUM!		0	0
Milepost	350	to	351	2	91.19	7.00		-	-	3.54	3.8	-	-	3.60	#NUM!		0	0
Milepost	351	to	352	2	92.19	7.00		-	-	3.52	3.8	-	-	3.59	#NUM!		0	0
		Total		14			0											0
		Weighted Average								3.66	3.88	#DIV/0!	#DIV/0!	3.71	#NUM!			
		Factor								1.00		1.00						
		Indicator Score								3.66		#DIV/0!						0.0%
		Pavement Index														3.71		

				EB			WB			EB		WB		Composite		Pavement Index	% Pavement Failure		
				# of Lanes	IRI	Cracking	# of Lanes	IRI	Cracking	PSR	PDI	PSR	PDI	EB	WB		EB	WB	
Segment 60-7		Interstate?		No															
Milepost	352	to	353	2	111.89	6.00		-	-	3.27	3.9	-	-	3.45	#NUM!		0	0	
Milepost	353	to	354	2	78.76	20.00		-	-	3.71	2.5	-	-	2.51	#NUM!		2	0	
Milepost	354	to	355	2	69.81	6.00		-	-	3.83	3.9	-	-	3.85	#NUM!		0	0	
Milepost	355	to	356	2	77.45	3.00		-	-	3.73	4.3	-	-	3.89	#NUM!		0	0	
Milepost	356	to	357	2	110.55	1.00		-	-	3.28	4.7	-	-	3.70	#NUM!		0	0	
Milepost	357	to	358	2	125.25	35.00		-	-	3.11	1.4	-	-	1.40	#NUM!		2	0	
Milepost	358	to	359	2	128.70	12.00		-	-	3.07	3.2	-	-	3.11	#NUM!		0	0	
Milepost	359	to	360	2	128.89	45.00		-	-	3.06	0.7	-	-	0.74	#NUM!		2	0	
Milepost	360	to	361	2	117.41	10.00		-	-	3.20	3.4	-	-	3.27	#NUM!		0	0	
Milepost	361	to	362	2	109.69	40.00		-	-	3.30	1.1	-	-	1.06	#NUM!		2	0	
Milepost	362	to	363	2	96.76	8.00		-	-	3.46	3.6	-	-	3.51	#NUM!		0	0	
Milepost	363	to	364	2	104.67	8.00		-	-	3.36	3.6	-	-	3.44	#NUM!		0	0	
Milepost	364	to	365	2	89.36	6.00		-	-	3.56	3.9	-	-	3.65	#NUM!		0	0	
Milepost	365	to	366	2	94.78	8.00		-	-	3.49	3.6	-	-	3.53	#NUM!		0	0	
Milepost	366	to	367	2	122.11	30.00		-	-	3.14	1.7	-	-	1.74	#NUM!		2	0	
Milepost	367	to	368	2	80.06	12.00		-	-	3.69	3.2	-	-	3.36	#NUM!		0	0	
Milepost	368	to	369	2	81.67	10.00		-	-	3.67	3.4	-	-	3.50	#NUM!		0	0	
Milepost	369	to	370	2	92.72	15.00		-	-	3.52	2.9	-	-	3.11	#NUM!		0	0	
Milepost	370	to	371	2	95.69	0.00		-	-	3.48	5.0	-	-	3.93	#NUM!		0	0	
Milepost	371	to	372	2	104.16	6.00		-	-	3.37	3.9	-	-	3.52	#NUM!		0	0	
Milepost	372	to	373	2	99.28	4.00		-	-	3.43	4.1	-	-	3.64	#NUM!		0	0	
Milepost	373	to	374	2	98.95	1.00		-	-	3.43	4.7	-	-	3.80	#NUM!		0	0	
Milepost	374	to	375	2	109.55	15.00		-	-	3.30	2.9	-	-	3.05	#NUM!		0	0	
Milepost	375	to	376	2	96.68	25.00		-	-	3.46	2.1	-	-	2.11	#NUM!		2	0	
Milepost	376	to	377	2	87.30	25.00		-	-	3.59	2.1	-	-	2.11	#NUM!		2	0	
Milepost	377	to	378	2	73.37	4.00		-	-	3.78	4.1	-	-	3.89	#NUM!		0	0	
Milepost	378	to	379	2	65.51	2.00		-	-	3.90	4.5	-	-	4.07	#NUM!		0	0	
Milepost	379	to	380	2	76.15	4.00		-	-	3.74	4.1	-	-	3.86	#NUM!		0	0	
Milepost	380	to	381	2	68.66	6.00		-	-	3.85	3.9	-	-	3.86	#NUM!		0	0	
Milepost	381	to	382	2	56.15	7.00		-	-	4.04	3.8	-	-	3.84	#NUM!		0	0	
Milepost	382	to	383	2	64.18	10.00		-	-	3.92	3.4	-	-	3.57	#NUM!		0	0	
Milepost	383	to	384	2	52.95	6.00		-	-	4.09	3.9	-	-	3.94	#NUM!		0	0	
			Total	64			0											14	
			Weighted Average							3.53	3.36	#DIV/0!	#DIV/0!	3.19	#NUM!				
			Factor							1.00		1.00							
			Indicator Score							3.53		#DIV/0!						21.9%	
			Pavement Index													3.19			

				EB			WB			EB		WB		Composite		Pavement Index	% Pavement Failure	
				# of Lanes	IRI	Cracking	# of Lanes	IRI	Cracking	PSR	PDI	PSR	PDI	EB	WB		EB	WB
Segment 60-8		Interstate?		No														
Milepost	384	to	385	2	91.73	0.00		-	-	3.53	5.0	-	-	3.97	#NUM!		0	0
Milepost	385	to	386	2	53.61	7.00		-	-	4.08	3.8	-	-	3.85	#NUM!		0	0
Milepost	386	to	387	2	73.38	9.00		-	-	3.78	3.5	-	-	3.61	#NUM!		0	0
Milepost	387	to	388	2	76.54	3.00		-	-	3.74	4.3	-	-	3.90	#NUM!		0	0
Milepost	388	to	389	4	101.90	6.00		-	-	3.39	3.9	-	-	3.54	#NUM!		0	0
			Total	12			0											0
			Weighted Average							3.65	4.05	#DIV/0!	#DIV/0!	3.73	#NUM!			
			Factor							1.00		1.00						
			Indicator Score							3.65		#DIV/0!						0.0%
			Pavement Index													3.73		
Segment 60-9		Interstate?		No														
Milepost	389	to	390	2	51.27	0.00		-	-	4.11	5.0	-	-	4.38	#NUM!		0	0
Milepost	390	to	391	2	53.53	0.00		-	-	4.08	5.0	-	-	4.36	#NUM!		0	0
Milepost	391	to	392	2	101.55	0.00		-	-	3.40	5.0	-	-	3.88	#NUM!		0	0
Milepost	392	to	393	2	56.52	0.00		-	-	4.03	5.0	-	-	4.32	#NUM!		0	0
Milepost	393	to	394	2	50.55	0.00		-	-	4.13	5.0	-	-	4.39	#NUM!		0	0
Milepost	394	to	395	2	52.96	0.00		-	-	4.09	5.0	-	-	4.36	#NUM!		0	0
Milepost	395	to	396	2	52.86	0.00		-	-	4.09	5.0	-	-	4.36	#NUM!		0	0
Milepost	396	to	397	2	68.64	0.00		-	-	3.85	5.0	-	-	4.20	#NUM!		0	0
Milepost	397	to	398	2	71.07	0.00		-	-	3.82	5.0	-	-	4.17	#NUM!		0	0
Milepost	398	to	399	2	59.77	0.00		-	-	3.98	5.0	-	-	4.29	#NUM!		0	0
Milepost	399	to	400	2	54.09	0.00		-	-	4.07	5.0	-	-	4.35	#NUM!		0	0
Milepost	400	to	401	2	73.05	0.00		-	-	3.79	5.0	-	-	4.15	#NUM!		0	0
Milepost	401	to	402	2	79.96	0.00		-	-	3.69	5.0	-	-	4.08	#NUM!		0	0
			Total	26			0											0
			Weighted Average							3.93	5.00	#DIV/0!	#DIV/0!	4.25	#NUM!			
			Factor							1.00		1.00						
			Indicator Score							3.93		#DIV/0!						0.0%
			Pavement Index													4.25		

Bridge Performance Area Data

Structure Name (A209)			Structure # (N8)	Milepost (A232)	Area (A225)	Bridge Sufficiency	Bridge Index					Functionally Obsolete Bridges	Bridge Rating	Hot Spots on Bridge Index map	
						Sufficiency Rating	Deck (N58)	Sub (N59)	Super (N60)	Eval (N67)	Lowest	Deck Area on Func Obsolete			
Segment 1															
#N/A				#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A			
		Total			#N/A										
		Weighted Average				#N/A					#N/A	#N/A			
		Factor				1.00					1.00	1.00			
		Indicator Score				#N/A						#N/A	#N/A		
		Bridge Index									#N/A				
Segment 2															
Pierce Wash Bridge		1373	310.05	2957	94.10	6.00	6.00	7.00	6.00	6.0	0				
Cottonwood Wash Br		1643	321.25	7064	94.10	6.00	7.00	7.00	7.00	6.0	0				
		Total		10,021											
		Weighted Average			94.10					6.00	0.00%				
		Factor			1.00					1.00	1.00				
		Indicator Score			94.10						0.00%	6			
		Bridge Index								6.00					
Segment 3															
Mortensen Wash Br		1641	328.29	8891	92.8	6.00	7.00	7.00	7.00	6.0	0				
		Total		8,891											
		Weighted Average			92.8					6.00	0.00%				
		Factor			1.00					1.00	1.00				
		Indicator Score			92.80						0.00%	6			
		Bridge Index								6.00					
Segment 4															
Show Low Creek Bridge		2823	341.68	12721	85.0	7.00	7.00	7.00	7.00	7.0	0				
		Total		12,721											
		Weighted Average			85.0					7.00	0.00%				
		Factor			1.00					1.00	1.00				
		Indicator Score			85.00						0.00%	7			
		Bridge Index								7.00					
Segment 5															
#N/A			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A				
		Total		#N/A	#N/A										
		Weighted Average			#N/A					#N/A	#N/A				
		Factor			1.00					1.00	1.00				
		Indicator Score			#N/A						#N/A	#N/A			
		Bridge Index								#N/A					

Structure Name (A209)			Structure # (N8)	Milepost (A232)	Area (A225)	Bridge Sufficiency	Bridge Index					Functionally Obsolete Bridges	Bridge Rating	Hot Spots on Bridge Index map	
						Sufficiency Rating	Deck (N58)	Sub (N59)	Super (N60)	Eval (N67)	Lowest	Deck Area on Func Obsolete			
Segment 6															
Rocky Arroyo Bridge			384	347.01	4136	82.2	6.00	6.00	7.00	6.00	6.0	0			
		Total			4,136										
		Weighted Average				82.2					6.00	0.00%			
		Factor				1.00					1.00	1.00			
		Indicator Score				82.20						0.00%	6		
		Bridge Index									6.00				
Segment 7															
Mallory Draw Bridge			2605	371.74	7755	96.3	7.00	7.00	7.00	7.00	7.0	0			
		Total			7,755										
		Weighted Average				96.3					7.00	0.00%			
		Factor				1.00					1.00	1.00			
		Indicator Score				96.30						0.00%	7		
		Bridge Index									7.00				
Segment 8															
Little Colo River Br			414	386.78	3645	81.1	6.00	7.00	7.00	6.00	6.0	0			
		Total			3,645										
		Weighted Average				81.1					6.00	0.00%			
		Factor				1.00					1.00	1.00			
		Indicator Score				81.10						0.00%	6		
		Bridge Index									6.00				
Segment 9															
#N/A				#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A			
		Total			#N/A										
		Weighted Average				#N/A					#N/A	#N/A			
		Factor				1.00					1.00	1.00			
		Indicator Score				#N/A						#N/A	#N/A		
		Bridge Index									#N/A				

Mobility Performance Area Data

Segment	Begin MP	End MP	Length (mi)	Facility Type	Flow Type	Terrain	No. of Lanes	Capacity Environment Type	Lane Width (feet)	Posted Speed Limit (mph)	Divided or Undivided	Access Points (per mile)	% No-Passing Zone	Street Parking
260 - 1	305.7	310	4.33	Rural	Uninterrupted	Rolling	4	Multilane Highway	12.00	45	Undivided	17.1	0%	N/A
260 - 2	310	323	13	Rural	Uninterrupted	Mountainous	2	Rural Two-Lane, Non-Signalized	12.00	65	Undivided	3.2	44%	N/A
260 - 3	323	337	14	Rural	Uninterrupted	Level	2	Rural Two-Lane, Non-Signalized	12.00	58	Undivided	7.1	40%	N/A
260 60 - 4	337	345	8	Rural	Interrupted	Mountainous	4	Urban/Rural Single or Multilane Signalized	12.00	38	Undivided	N/A	0%	N/A
260 - 5	341	357	16	Rural	Interrupted	Rolling	4	Urban/Rural Single or Multilane Signalized	12.00	41	Undivided	N/A	0%	N/A
60 - 6	345	352	7	Rural	Uninterrupted	Rolling	2	Rural Two-Lane, Non-Signalized	12.00	65	Undivided	52.4	87%	N/A
60 - 7	352	384	32	Rural	Uninterrupted	Mountainous	2	Rural Two-Lane, Non-Signalized	12.00	64	Undivided	0.1	71%	N/A
60 - 8	384	389	5	Rural	Interrupted	Rolling	2.336	Urban/Rural Single or Multilane Signalized	12.00	39	Undivided	N/A	30%	N/A
60 - 9	389	402	13	Rural	Uninterrupted	Rolling	2	Rural Two-Lane, Non-Signalized	12.00	65	Undivided	10.2	37%	N/A

Car TTI and PTI/Truck TTTI and TPTI – Northbound/Eastbound

Segment	TMC	timeperiod	week_type	ROAD_NUMBER	road_direction	cars_mean	trucks_mean	cars_P05	trucks_P05	Posted Speed limit	Assumed car free-flow speed	Assumed truck free-flow speed	Cars_PeakTTI	Trucks_PeakTTI	Cars_PeakPTI	Trucks_PeakPTI
260-1	115N06321	1 AM Peak	Weekday	AZ-260	Eastbound	46.4	39.8	33.8		45	45	45	1.04	1.31	No Data	No Data
260-1	115N06321	2 Mid Day	Weekday	AZ-260	Eastbound	43.4	34.4			45	45	45				
260-1	115N06321	3 PM Peak	Weekday	AZ-260	Eastbound	44.8	39.0	21.3		45	45	45				
260-1	115N06321	4 Evening	Weekday	AZ-260	Eastbound	45.7	41.4	31.8		45	45	45				
260-1	115N06320	1 AM Peak	Weekday	AZ-260	Eastbound	48.1	46.5	38.7	35.5	45	45	45	1.00	1.00	2.11	1.58
260-1	115N06320	2 Mid Day	Weekday	AZ-260	Eastbound	47.0	47.1	30.4	35.5	45	45	45				
260-1	115N06320	3 PM Peak	Weekday	AZ-260	Eastbound	46.7	45.0	21.3	28.4	45	45	45				
260-1	115N06320	4 Evening	Weekday	AZ-260	Eastbound	49.4	48.1	35.5	42.6	45	45	45				
260-1	115N06319	1 AM Peak	Weekday	AZ-260	Eastbound	47.3	45.6	35.3	31.5	45	45	45	1.00	1.09	1.96	3.15
260-1	115N06319	2 Mid Day	Weekday	AZ-260	Eastbound	45.9	44.6	24.6	25.5	45	45	45				
260-1	115N06319	3 PM Peak	Weekday	AZ-260	Eastbound	45.6	41.1	23.0	14.3	45	45	45				
260-1	115N06319	4 Evening	Weekday	AZ-260	Eastbound	47.7	43.5	34.8	24.5	45	45	45				
260-1	115N06318	1 AM Peak	Weekday	AZ-260	Eastbound	56.4	53.8	44.8	44.8	47	47	47	1.00	1.00	1.18	1.08
260-1	115N06318	2 Mid Day	Weekday	AZ-260	Eastbound	55.0	53.3	39.7	43.6	47	47	47				
260-1	115N06318	3 PM Peak	Weekday	AZ-260	Eastbound	55.4	54.7	42.5	43.6	47	47	47				
260-1	115N06318	4 Evening	Weekday	AZ-260	Eastbound	55.2	53.3	42.9	43.6	47	47	47				
260-2	115N06316	1 AM Peak	Weekday	AZ-260	Eastbound	64.4	60.6	56.0	54.5	60	60	60	1.00	1.01	1.18	1.16
260-2	115N06316	2 Mid Day	Weekday	AZ-260	Eastbound	63.4	60.8	53.5	53.5	60	60	60				
260-2	115N06316	3 PM Peak	Weekday	AZ-260	Eastbound	63.8	61.2	55.3	52.8	60	60	60				
260-2	115N06316	4 Evening	Weekday	AZ-260	Eastbound	62.9	59.8	51.4	52.1	60	60	60				
260-2	115N06317	1 AM Peak	Weekday	AZ-260	Eastbound	65.5	61.1	56.8	52.8	65	65	65	1.03	1.08	1.28	1.31
260-2	115N06317	2 Mid Day	Weekday	AZ-260	Eastbound	64.7	61.3	56.2	53.4	65	65	65				
260-2	115N06317	3 PM Peak	Weekday	AZ-260	Eastbound	64.9	62.8	56.4	54.7	65	65	65				
260-2	115N06317	4 Evening	Weekday	AZ-260	Eastbound	63.1	60.1	50.9	49.7	65	65	65				
260-2	115N06318	1 AM Peak	Weekday	AZ-260	Eastbound	56.4	53.8	44.8	44.8	65	65	65	1.18	1.22	1.64	1.49
260-2	115N06318	2 Mid Day	Weekday	AZ-260	Eastbound	55.0	53.3	39.7	43.6	65	65	65				
260-2	115N06318	3 PM Peak	Weekday	AZ-260	Eastbound	55.4	54.7	42.5	43.6	65	65	65				
260-2	115N06318	4 Evening	Weekday	AZ-260	Eastbound	55.2	53.3	42.9	43.6	65	65	65				
260-3	115N06316	1 AM Peak	Weekday	AZ-260	Eastbound	64.4	60.6	56.0	54.5	65	65	65	1.03	1.09	1.26	1.25
260-3	115N06316	2 Mid Day	Weekday	AZ-260	Eastbound	63.4	60.8	53.5	53.5	65	65	65				
260-3	115N06316	3 PM Peak	Weekday	AZ-260	Eastbound	63.8	61.2	55.3	52.8	65	65	65				
260-3	115N06316	4 Evening	Weekday	AZ-260	Eastbound	62.9	59.8	51.4	52.1	65	65	65				
260-3	115N06315	1 AM Peak	Weekday	AZ-260	Eastbound	64.1	61.1	53.5	53.8	65	65	65	1.04	1.07	1.28	1.21
260-3	115N06315	2 Mid Day	Weekday	AZ-260	Eastbound	63.1	61.1	52.2	53.5	65	65	65				
260-3	115N06315	3 PM Peak	Weekday	AZ-260	Eastbound	63.4	61.8	52.7	55.3	65	65	65				
260-3	115N06315	4 Evening	Weekday	AZ-260	Eastbound	62.4	60.9	50.9	53.5	65	65	65				
260-3	115N06314	1 AM Peak	Weekday	AZ-260	Eastbound	63.5	59.2	53.4	52.7	63	63	63	1.03	1.07	1.24	1.24
260-3	115N06314	2 Mid Day	Weekday	AZ-260	Eastbound	62.1	59.0	51.6	51.6	63	63	63				
260-3	115N06314	3 PM Peak	Weekday	AZ-260	Eastbound	62.6	60.2	53.1	53.4	63	63	63				
260-3	115N06314	4 Evening	Weekday	AZ-260	Eastbound	61.7	58.9	51.0	51.0	63	63	63				
260-3	115N06313	1 AM Peak	Weekday	AZ-260	Eastbound	48.8	49.1			55	55	55	1.17	1.16	No Data	No Data
260-3	115N06313	2 Mid Day	Weekday	AZ-260	Eastbound	47.2	47.4			55	55	55				
260-3	115N06313	3 PM Peak	Weekday	AZ-260	Eastbound	48.1	48.1			55	55	55				
260-3	115N06313	4 Evening	Weekday	AZ-260	Eastbound	50.4	51.8	34.8	40.2	55	55	55				

Segment	TMC	timeperiod	week_type	ROAD_NUMBER	road_direction	cars_mean	trucks_mean	cars_P05	trucks_P05	Posted Speed limit	Assumed car free-flow speed	Assumed truck free-flow speed	Cars_PeakTTI	Trucks_PeakTTI	Cars_PeakPTI	Trucks_PeakPTI
260 60-4	115N06313	1 AM Peak	Weekday	AZ-260	Eastbound	48.8	49.1	28.3	32.5	45	45	45	1.00	1.00	2.01	2.12
260 60-4	115N06313	2 Mid Day	Weekday	AZ-260	Eastbound	47.2	47.4	22.4	21.7	45	45	45				
260 60-4	115N06313	3 PM Peak	Weekday	AZ-260	Eastbound	48.1	48.1	25.5	21.2	45	45	45				
260 60-4	115N06313	4 Evening	Weekday	AZ-260	Eastbound	50.4	51.8	34.8	40.2	45	45	45				
260 60-4	115N06000	1 AM Peak	Weekday	AZ-260	Eastbound	40.6	37.9	11.8	10.6	45	45	45	1.18	1.26	4.80	7.99
260 60-4	115N06000	2 Mid Day	Weekday	AZ-260	Eastbound	38.5	36.8	10.6	8.7	45	45	45				
260 60-4	115N06000	3 PM Peak	Weekday	AZ-260	Eastbound	38.0	37.6	9.6	9.9	45	45	45				
260 60-4	115N06000	4 Evening	Weekday	AZ-260	Eastbound	38.0	35.6	9.3	5.6	45	45	45				
260 60-4	115N06257	1 AM Peak	Weekday	US-60	Westbound	27.4	25.8	5.8	8.7	35	35	35	1.45	1.57	6.26	7.05
260 60-4	115N06257	2 Mid Day	Weekday	US-60	Westbound	24.1	22.8	5.6	6.8	35	35	35				
260 60-4	115N06257	3 PM Peak	Weekday	US-60	Westbound	24.9	22.3	6.2	5.0	35	35	35				
260 60-4	115N06257	4 Evening	Weekday	US-60	Westbound	28.7	27.8	13.0	13.3	35	35	35				
260 60-4	115N05944	1 AM Peak	Weekday	US-60	Westbound	25.9	25.9			35	35	35	1.35	1.44	No Data	No Data
260 60-4	115N05944	2 Mid Day	Weekday	US-60	Westbound	27.0	24.3			35	35	35				
260 60-4	115N05944	3 PM Peak	Weekday	US-60	Westbound	27.3	25.2			35	35	35				
260 60-4	115N05944	4 Evening	Weekday	US-60	Westbound	28.6	26.1	6.2	9.9	35	35	35				
260 60-4	115N05945	1 AM Peak	Weekday	US-60	Westbound	48.2	46.1	19.3	9.9	35	35	35	1.00	1.00	3.13	3.52
260 60-4	115N05945	2 Mid Day	Weekday	US-60	Westbound	47.0	44.4	11.2	10.6	35	35	35				
260 60-4	115N05945	3 PM Peak	Weekday	US-60	Westbound	51.0	45.1	20.8	12.0	35	35	35				
260 60-4	115N05945	4 Evening	Weekday	US-60	Westbound	50.6	47.2	19.3	17.1	35	35	35				
260 60-4	115N06258	1 AM Peak	Weekday	US-60	Westbound	62.6	50.5	53.2	20.5	55	55	55	1.00	1.10	1.04	2.70
260 60-4	115N06258	2 Mid Day	Weekday	US-60	Westbound	62.2	51.1	53.5	31.7	55	55	55				
260 60-4	115N06258	3 PM Peak	Weekday	US-60	Westbound	62.8	51.7	54.2	26.7	55	55	55				
260 60-4	115N06258	4 Evening	Weekday	US-60	Westbound	63.0	50.6	54.0	26.7	55	55	55				
260-5	115N06311	1 AM Peak	Weekday	AZ-260	Eastbound	39.6	33.8	19.9	7.5	44	44	44	1.21	1.35	3.50	6.37
260-5	115N06311	2 Mid Day	Weekday	AZ-260	Eastbound	36.0	32.3	12.4	6.8	44	44	44				
260-5	115N06311	3 PM Peak	Weekday	AZ-260	Eastbound	36.9	32.4	12.9	7.5	44	44	44				
260-5	115N06311	4 Evening	Weekday	AZ-260	Eastbound	38.1	34.7	14.9	13.7	44	44	44				
260-5	115N06310	1 AM Peak	Weekday	AZ-260	Eastbound	41.9	33.2			45	45	45	1.15	1.55	No Data	No Data
260-5	115N06310	2 Mid Day	Weekday	AZ-260	Eastbound	39.0	29.0			45	45	45				
260-5	115N06310	3 PM Peak	Weekday	AZ-260	Eastbound	40.1	29.7			45	45	45				
260-5	115N06310	4 Evening	Weekday	AZ-260	Eastbound	41.9	38.7			45	45	45				
260-5	115N06309	1 AM Peak	Weekday	AZ-260	Eastbound	41.0	39.8	21.7	26.4	44	44	44	1.12	1.27	3.00	8.80
260-5	115N06309	2 Mid Day	Weekday	AZ-260	Eastbound	39.0	35.8	14.6	9.8	44	44	44				
260-5	115N06309	3 PM Peak	Weekday	AZ-260	Eastbound	39.7	34.3	16.8	5.0	44	44	44				
260-5	115N06309	4 Evening	Weekday	AZ-260	Eastbound	40.5	40.2	21.7	28.2	44	44	44				
260-5	115N06308	1 AM Peak	Weekday	AZ-260	Eastbound					35	35	35	No Data	No Data	No Data	No Data
260-5	115N06308	2 Mid Day	Weekday	AZ-260	Eastbound					35	35	35				
260-5	115N06308	3 PM Peak	Weekday	AZ-260	Eastbound					35	35	35				
260-5	115N06308	4 Evening	Weekday	AZ-260	Eastbound					35	35	35				
260-5	115N06307	1 AM Peak	Weekday	AZ-260	Eastbound					35	35	35	No Data	No Data	No Data	No Data
260-5	115N06307	2 Mid Day	Weekday	AZ-260	Eastbound					35	35	35				
260-5	115N06307	3 PM Peak	Weekday	AZ-260	Eastbound					35	35	35				
260-5	115N06307	4 Evening	Weekday	AZ-260	Eastbound					35	35	35				
260-5	115N06306	1 AM Peak	Weekday	AZ-260	Eastbound					41	41	41	No Data	No Data	No Data	No Data
260-5	115N06306	2 Mid Day	Weekday	AZ-260	Eastbound					41	41	41				
260-5	115N06306	3 PM Peak	Weekday	AZ-260	Eastbound					41	41	41				
260-5	115N06306	4 Evening	Weekday	AZ-260	Eastbound					41	41	41				
260-5	115N06305	1 AM Peak	Weekday	AZ-260	Eastbound	49.6	47.4	34.0	33.6	50	50	50	1.04	1.09	1.96	4.23
260-5	115N06305	2 Mid Day	Weekday	AZ-260	Eastbound	48.3	45.9	25.5	21.1	50	50	50				
260-5	115N06305	3 PM Peak	Weekday	AZ-260	Eastbound	48.4	46.0	28.0	11.8	50	50	50				
260-5	115N06305	4 Evening	Weekday	AZ-260	Eastbound	48.9	47.5	36.7	37.7	50	50	50				
260-5	115N06002	1 AM Peak	Weekday	AZ-260	Eastbound	49.9	45.8	30.4	20.5	54	54	54	1.09	1.21	1.95	3.47
260-5	115N06002	2 Mid Day	Weekday	AZ-260	Eastbound	49.9	44.4	27.7	15.5	54	54	54				
260-5	115N06002	3 PM Peak	Weekday	AZ-260	Eastbound	49.6	48.5	27.7	36.7	54	54	54				
260-5	115N06002	4 Evening	Weekday	AZ-260	Eastbound	49.7	46.8	32.3	33.0	54	54	54				

Segment	TMC	timeperiod	week_type	ROAD_NUMBER	road_direction	cars_mean	trucks_mean	cars_P05	trucks_P05	Posted Speed limit	Assumed car free-flow speed	Assumed truck free-flow speed	Cars_PeakTTI	Trucks_PeakTTI	Cars_PeakPTI	Trucks_PeakPTI
60-6	115P06258	1 AM Peak	Weekday	US-60	Eastbound	52.5	47.0	28.6	17.4	65	65	65	1.29	1.41	2.75	6.15
60-6	115P06258	2 Mid Day	Weekday	US-60	Eastbound	50.3	47.7	23.6	10.6	65	65	65				
60-6	115P06258	3 PM Peak	Weekday	US-60	Eastbound	51.4	46.1	26.7	12.4	65	65	65				
60-6	115P06258	4 Evening	Weekday	US-60	Eastbound	52.6	48.4	24.5	12.4	65	65	65				
60-6	115P05946	1 AM Peak	Weekday	US-60	Eastbound	60.3	48.7	46.6	17.4	65	65	65	1.09	1.33	1.39	3.73
60-6	115P05946	2 Mid Day	Weekday	US-60	Eastbound	59.9	51.1	46.6	31.7	65	65	65				
60-6	115P05946	3 PM Peak	Weekday	US-60	Eastbound	60.9	49.1	49.7	23.6	65	65	65				
60-6	115P05946	4 Evening	Weekday	US-60	Eastbound	60.8	50.3	49.1	20.5	65	65	65				
60-7	115P05946	1 AM Peak	Weekday	US-60	Eastbound	60.3	48.7	46.6	17.4	56	56	56	1.00	1.15	1.20	3.21
60-7	115P05946	2 Mid Day	Weekday	US-60	Eastbound	59.9	51.1	46.6	31.7	56	56	56				
60-7	115P05946	3 PM Peak	Weekday	US-60	Eastbound	60.9	49.1	49.7	23.6	56	56	56				
60-7	115P05946	4 Evening	Weekday	US-60	Eastbound	60.8	50.3	49.1	20.5	56	56	56				
60-7	115P06259	1 AM Peak	Weekday	US-60	Eastbound	58.5	59.6	36.7	44.7	64	64	64	1.13	1.10	2.08	1.48
60-7	115P06259	2 Mid Day	Weekday	US-60	Eastbound	56.8	59.2	30.9	44.7	64	64	64				
60-7	115P06259	3 PM Peak	Weekday	US-60	Eastbound	58.5	58.4	34.0	43.5	64	64	64				
60-7	115P06259	4 Evening	Weekday	US-60	Eastbound	60.2	59.5	45.1	43.8	64	64	64				
60-7	115P06642	1 AM Peak	Weekday	US-60	Eastbound	62.6	61.6	53.1	48.3	65	65	65	1.05	1.06	1.24	1.35
60-7	115P06642	2 Mid Day	Weekday	US-60	Eastbound	62.1	62.2	52.4	54.5	65	65	65				
60-7	115P06642	3 PM Peak	Weekday	US-60	Eastbound	62.4	62.2	54.5	54.5	65	65	65				
60-7	115P06642	4 Evening	Weekday	US-60	Eastbound	62.8	62.5	53.1	53.1	65	65	65				
60-7	115P06260	1 AM Peak	Weekday	US-60	Eastbound	61.5	53.3	43.5	28.6	65	65	65	1.08	1.22	1.67	2.27
60-7	115P06260	2 Mid Day	Weekday	US-60	Eastbound	61.0	56.8	41.4	32.9	65	65	65				
60-7	115P06260	3 PM Peak	Weekday	US-60	Eastbound	62.5	56.2	42.9	32.1	65	65	65				
60-7	115P06260	4 Evening	Weekday	US-60	Eastbound	60.5	54.5	38.9	30.5	65	65	65				
60-7	115P06261	1 AM Peak	Weekday	US-60	Eastbound	65.6	61.0	57.8	31.7	65	65	65	1.01	1.06	1.17	2.05
60-7	115P06261	2 Mid Day	Weekday	US-60	Eastbound	64.6	62.1	55.3	53.8	65	65	65				
60-7	115P06261	3 PM Peak	Weekday	US-60	Eastbound	65.8	62.6	58.1	53.4	65	65	65				
60-7	115P06261	4 Evening	Weekday	US-60	Eastbound	65.1	62.1	56.5	53.4	65	65	65				
60-7	115P05947	1 AM Peak	Weekday	US-60	Eastbound	55.3	49.9	14.9	14.9	65	65	65	1.25	1.30	4.75	4.36
60-7	115P05947	2 Mid Day	Weekday	US-60	Eastbound	52.0	53.1	13.7	15.5	65	65	65				
60-7	115P05947	3 PM Peak	Weekday	US-60	Eastbound	52.9	53.5	16.8	17.4	65	65	65				
60-7	115P05947	4 Evening	Weekday	US-60	Eastbound	56.3	51.2	25.5	16.8	65	65	65				
60-8	115P05947	1 AM Peak	Weekday	US-60	Eastbound	55.3	49.9	14.9	14.9	65	65	65	1.25	1.30	4.75	4.36
60-8	115P05947	2 Mid Day	Weekday	US-60	Eastbound	52.0	53.1	13.7	15.5	65	65	65				
60-8	115P05947	3 PM Peak	Weekday	US-60	Eastbound	52.9	53.5	16.8	17.4	65	65	65				
60-8	115P05947	4 Evening	Weekday	US-60	Eastbound	56.3	51.2	25.5	16.8	65	65	65				
60-8	115P06262	1 AM Peak	Weekday	US-60	Eastbound	44.0	43.9	12.4	16.8	56	56	56	1.27	1.33	5.62	7.50
60-8	115P06262	2 Mid Day	Weekday	US-60	Eastbound	44.3	43.1	14.2	10.6	56	56	56				
60-8	115P06262	3 PM Peak	Weekday	US-60	Eastbound	45.4	42.2	16.8	7.5	56	56	56				
60-8	115P06262	4 Evening	Weekday	US-60	Eastbound	44.1	46.2	9.9	18.6	56	56	56				
60-8	115P05948	1 AM Peak	Weekday	US-60	Eastbound					34	34	34	No Data	No Data	No Data	No Data
60-8	115P05948	2 Mid Day	Weekday	US-60	Eastbound					34	34	34				
60-8	115P05948	3 PM Peak	Weekday	US-60	Eastbound					34	34	34				
60-8	115P05948	4 Evening	Weekday	US-60	Eastbound					34	34	34				
60-8	115P06263	1 AM Peak	Weekday	US-60	Eastbound	51.9	55.8	23.0	37.3	45	45	45	1.00	1.00	1.96	1.21
60-8	115P06263	2 Mid Day	Weekday	US-60	Eastbound	54.0	57.6	26.1	41.6	45	45	45				
60-8	115P06263	3 PM Peak	Weekday	US-60	Eastbound	55.8	57.1	34.3	40.4	45	45	45				
60-8	115P06263	4 Evening	Weekday	US-60	Eastbound	54.7	57.7	32.5	40.4	45	45	45				
60-9	115P06263	1 AM Peak	Weekday	US-60	Eastbound	51.9	55.8	23.0	37.3	63	63	63	1.22	1.13	2.75	1.70
60-9	115P06263	2 Mid Day	Weekday	US-60	Eastbound	54.0	57.6	26.1	41.6	63	63	63				
60-9	115P06263	3 PM Peak	Weekday	US-60	Eastbound	55.8	57.1	34.3	40.4	63	63	63				
60-9	115P06263	4 Evening	Weekday	US-60	Eastbound	54.7	57.7	32.5	40.4	63	63	63				
60-9	115P06651	1 AM Peak	Weekday	US-60	Eastbound	59.4	57.7	37.0	33.9	65	65	65	1.09	1.13	1.76	1.92
60-9	115P06651	2 Mid Day	Weekday	US-60	Eastbound	60.9	61.5	40.4	52.7	65	65	65				
60-9	115P06651	3 PM Peak	Weekday	US-60	Eastbound	63.1	60.2	47.2	50.2	65	65	65				
60-9	115P06651	4 Evening	Weekday	US-60	Eastbound	62.4	59.6	43.0	47.4	65	65	65				

Car TTI and PTI/Truck TTTI and TPTI – Southbound/Westbound

Segment	TMC	timeperiod	week_type	ROAD_NUMBER	road_direction	cars_mean	trucks_mean	cars_P05	trucks_P05	Posted Speed limit	Assumed car free-flow speed	Assumed truck free-flow speed	Cars_PeakTTI	Trucks_PeakTTI	Cars_PeakPTI	Trucks_PeakPTI
260-1	115P06319	1 AM Peak	Weekday	AZ-260	Westbound	54.7	55.1	32.1	43.6	47	47	47	1.00	1.00	1.46	1.21
260-1	115P06319	2 Mid Day	Weekday	AZ-260	Westbound	56.0	54.3	41.3	42.9	47	47	47				
260-1	115P06319	3 PM Peak	Weekday	AZ-260	Westbound	56.7	53.7	40.1	39.7	47	47	47				
260-1	115P06319	4 Evening	Weekday	AZ-260	Westbound	55.6	54.0	42.2	38.8	47	47	47				
260-1	115P06320	1 AM Peak	Weekday	AZ-260	Westbound	45.0	42.8	21.2	23.0	45	45	45	1.00	1.05	2.20	2.07
260-1	115P06320	2 Mid Day	Weekday	AZ-260	Westbound	45.7	46.3	23.3	40.5	45	45	45				
260-1	115P06320	3 PM Peak	Weekday	AZ-260	Westbound	44.8	45.0	20.5	21.7	45	45	45				
260-1	115P06320	4 Evening	Weekday	AZ-260	Westbound	46.1	45.4	33.9	28.7	45	45	45				
260-1	115P06321	1 AM Peak	Weekday	AZ-260	Westbound	44.7	33.0	23.7	17.0	45	45	45	1.01	1.36	1.90	2.64
260-1	115P06321	2 Mid Day	Weekday	AZ-260	Westbound	45.4	44.0	28.4	22.4	45	45	45				
260-1	115P06321	3 PM Peak	Weekday	AZ-260	Westbound	45.6	43.5	28.4	26.6	45	45	45				
260-1	115P06321	4 Evening	Weekday	AZ-260	Westbound	46.9	42.4	32.8	23.7	45	45	45				
260-1	115P06322	1 AM Peak	Weekday	AZ-260	Westbound	45.6	44.0	26.8	22.7	45	45	45	1.00	1.08	1.81	3.29
260-1	115P06322	2 Mid Day	Weekday	AZ-260	Westbound	46.0	41.8	25.3	13.7	45	45	45				
260-1	115P06322	3 PM Peak	Weekday	AZ-260	Westbound	46.8	44.1	29.4	19.9	45	45	45				
260-1	115P06322	4 Evening	Weekday	AZ-260	Westbound	45.9	44.2	24.8	24.0	45	45	45				
260-2	115P06317	1 AM Peak	Weekday	AZ-260	Westbound	64.5	62.7	54.5	56.4	65	65	65	1.01	1.05	1.19	1.16
260-2	115P06317	2 Mid Day	Weekday	AZ-260	Westbound	64.5	62.0	56.4	56.0	65	65	65				
260-2	115P06317	3 PM Peak	Weekday	AZ-260	Westbound	65.3	62.4	56.8	56.0	65	65	65				
260-2	115P06317	4 Evening	Weekday	AZ-260	Westbound	64.4	62.5	55.3	56.0	65	65	65				
260-2	115P06318	1 AM Peak	Weekday	AZ-260	Westbound	64.7	60.9	54.5	51.3	65	65	65	1.02	1.07	1.21	1.27
260-2	115P06318	2 Mid Day	Weekday	AZ-260	Westbound	65.0	61.8	56.9	54.7	65	65	65				
260-2	115P06318	3 PM Peak	Weekday	AZ-260	Westbound	65.5	62.3	56.2	55.9	65	65	65				
260-2	115P06318	4 Evening	Weekday	AZ-260	Westbound	63.6	61.7	53.8	52.8	65	65	65				
260-2	115P06319	1 AM Peak	Weekday	AZ-260	Westbound	54.7	55.1	32.1	43.6	60	60	60	1.11	1.13	1.89	1.56
260-2	115P06319	2 Mid Day	Weekday	AZ-260	Westbound	56.0	54.3	41.3	42.9	60	60	60				
260-2	115P06319	3 PM Peak	Weekday	AZ-260	Westbound	56.7	53.7	40.1	39.7	60	60	60				
260-2	115P06319	4 Evening	Weekday	AZ-260	Westbound	55.6	54.0	42.2	38.8	60	60	60				
260-3	115P06314	1 AM Peak	Weekday	AZ-260	Westbound	47.9	49.2	25.2	23.6	55	55	55	1.15	1.13	2.33	2.64
260-3	115P06314	2 Mid Day	Weekday	AZ-260	Westbound	48.3	48.9	23.6	23.0	55	55	55				
260-3	115P06314	3 PM Peak	Weekday	AZ-260	Westbound	49.5	48.8	27.3	20.8	55	55	55				
260-3	115P06314	4 Evening	Weekday	AZ-260	Westbound	51.1	52.6	36.1	42.9	55	55	55				
260-3	115P06315	1 AM Peak	Weekday	AZ-260	Westbound	60.8	57.4	48.8	42.6	63	63	63	1.05	1.10	1.30	1.49
260-3	115P06315	2 Mid Day	Weekday	AZ-260	Westbound	61.3	58.3	50.5	49.7	63	63	63				
260-3	115P06315	3 PM Peak	Weekday	AZ-260	Westbound	62.3	58.5	51.0	48.5	63	63	63				
260-3	115P06315	4 Evening	Weekday	AZ-260	Westbound	60.6	58.6	50.1	48.5	63	63	63				
260-3	115P06316	1 AM Peak	Weekday	AZ-260	Westbound	63.7	62.3	50.9	55.9	65	65	65	1.03	1.05	1.28	1.19
260-3	115P06316	2 Mid Day	Weekday	AZ-260	Westbound	63.6	62.0	52.7	55.6	65	65	65				
260-3	115P06316	3 PM Peak	Weekday	AZ-260	Westbound	64.6	61.8	54.1	55.6	65	65	65				
260-3	115P06316	4 Evening	Weekday	AZ-260	Westbound	63.1	62.1	52.7	54.7	65	65	65				
260-3	115P06317	1 AM Peak	Weekday	AZ-260	Westbound	64.5	62.7	54.5	56.4	65	65	65	1.01	1.05	1.19	1.16
260-3	115P06317	2 Mid Day	Weekday	AZ-260	Westbound	64.5	62.0	56.4	56.0	65	65	65				
260-3	115P06317	3 PM Peak	Weekday	AZ-260	Westbound	65.3	62.4	56.8	56.0	65	65	65				
260-3	115P06317	4 Evening	Weekday	AZ-260	Westbound	64.4	62.5	55.3	56.0	65	65	65				

Segment	TMC	timeperiod	week_type	ROAD_NUMBER	road_direction	cars_mean	trucks_mean	cars_P05	trucks_P05	Posted Speed limit	Assumed car free-flow speed	Assumed truck free-flow speed	Cars_PeakTTI	Trucks_PeakTTI	Cars_PeakPTI	Trucks_PeakPTI
260 60-4	115N05945	1 AM Peak	Weekday	US-60	Westbound	48.2	46.1	19.3	9.9	51	51	51	1.08	1.15	4.56	5.13
260 60-4	115N05945	2 Mid Day	Weekday	US-60	Westbound	47.0	44.4	11.2	10.6	51	51	51				
260 60-4	115N05945	3 PM Peak	Weekday	US-60	Westbound	51.0	45.1	20.8	12.0	51	51	51				
260 60-4	115N05945	4 Evening	Weekday	US-60	Westbound	50.6	47.2	19.3	17.1	51	51	51				
260 60-4	115N05944	1 AM Peak	Weekday	US-60	Westbound	25.9	25.9		8.7	35	35	35	1.35	1.44	No Data	4.69
260 60-4	115N05944	2 Mid Day	Weekday	US-60	Westbound	27.0	24.3		7.5	35	35	35				
260 60-4	115N05944	3 PM Peak	Weekday	US-60	Westbound	27.3	25.2		7.5	35	35	35				
260 60-4	115N05944	4 Evening	Weekday	US-60	Westbound	28.6	26.1	6.2	9.9	35	35	35				
260 60-4	115N06257	1 AM Peak	Weekday	US-60	Westbound	27.4	25.8	5.8	8.7	35	35	35	1.45	1.57	6.26	7.05
260 60-4	115N06257	2 Mid Day	Weekday	US-60	Westbound	24.1	22.8	5.6	6.8	35	35	35				
260 60-4	115N06257	3 PM Peak	Weekday	US-60	Westbound	24.9	22.3	6.2	5.0	35	35	35				
260 60-4	115N06257	4 Evening	Weekday	US-60	Westbound	28.7	27.8	13.0	13.3	35	35	35				
260 60-4	115P06000	1 AM Peak	Weekday	AZ-260	Westbound	28.5	28.6	5.0	9.9	35	35	35	1.32	1.30	9.94	4.69
260 60-4	115P06000	2 Mid Day	Weekday	AZ-260	Westbound	26.5	27.1	3.5	8.7	35	35	35				
260 60-4	115P06000	3 PM Peak	Weekday	AZ-260	Westbound	26.9	26.9	4.4	9.5	35	35	35				
260 60-4	115P06000	4 Evening	Weekday	AZ-260	Westbound	27.8	29.1	3.7	7.5	35	35	35				
260 60-4	115P06313	1 AM Peak	Weekday	AZ-260	Westbound	41.4	40.0	17.9	17.4	46	46	46	1.10	1.27	2.55	4.31
260 60-4	115P06313	2 Mid Day	Weekday	AZ-260	Westbound	42.7	41.1	21.1	22.7	46	46	46				
260 60-4	115P06313	3 PM Peak	Weekday	AZ-260	Westbound	43.2	39.6	21.3	15.6	46	46	46				
260 60-4	115P06313	4 Evening	Weekday	AZ-260	Westbound	41.9	35.8	21.1	10.6	46	46	46				
260 60-4	115P06314	1 AM Peak	Weekday	AZ-260	Westbound	47.9	49.2	25.2	23.6	57	57	57	1.19	1.17	2.41	2.74
260 60-4	115P06314	2 Mid Day	Weekday	AZ-260	Westbound	48.3	48.9	23.6	23.0	57	57	57				
260 60-4	115P06314	3 PM Peak	Weekday	AZ-260	Westbound	49.5	48.8	27.3	20.8	57	57	57				
260 60-4	115P06314	4 Evening	Weekday	AZ-260	Westbound	51.1	52.6	36.1	42.9	57	57	57				
260-5	115P06305	1 AM Peak	Weekday	AZ-260	Westbound	48.5	44.8	28.4	17.4	54	54	54	1.12	1.21	1.91	3.12
260-5	115P06305	2 Mid Day	Weekday	AZ-260	Westbound	49.8	47.6	31.6	33.6	54	54	54				
260-5	115P06305	3 PM Peak	Weekday	AZ-260	Westbound	50.1	44.7	33.6	23.7	54	54	54				
260-5	115P06305	4 Evening	Weekday	AZ-260	Westbound	48.2	48.5	32.9	37.7	54	54	54				
260-5	115P06306	1 AM Peak	Weekday	AZ-260	Westbound	45.4	43.1	13.4	17.4	50	50	50	1.10	1.16	3.74	2.87
260-5	115P06306	2 Mid Day	Weekday	AZ-260	Westbound	45.8	45.9	14.9	21.7	50	50	50				
260-5	115P06306	3 PM Peak	Weekday	AZ-260	Westbound	47.8	45.2	26.6	20.5	50	50	50				
260-5	115P06306	4 Evening	Weekday	AZ-260	Westbound	48.3	48.3	32.5	25.4	50	50	50				
260-5	115P06307	1 AM Peak	Weekday	AZ-260	Westbound					42	42	42	No Data	No Data	No Data	No Data
260-5	115P06307	2 Mid Day	Weekday	AZ-260	Westbound					42	42	42				
260-5	115P06307	3 PM Peak	Weekday	AZ-260	Westbound					42	42	42				
260-5	115P06307	4 Evening	Weekday	AZ-260	Westbound					42	42	42				
260-5	115P06308	1 AM Peak	Weekday	AZ-260	Westbound	33.9	25.7	8.4	10.6	35	35	35	1.05	1.38	4.17	No Data
260-5	115P06308	2 Mid Day	Weekday	AZ-260	Westbound	33.4	29.9	9.9	8.7	35	35	35				
260-5	115P06308	3 PM Peak	Weekday	AZ-260	Westbound	33.6	29.7	11.2	10.6	35	35	35				
260-5	115P06308	4 Evening	Weekday	AZ-260	Westbound	34.4	25.4	9.9		35	35	35				
260-5	115P06309	1 AM Peak	Weekday	AZ-260	Westbound	32.0	31.4	9.9	12.4	35	35	35	1.13	1.36	3.75	No Data
260-5	115P06309	2 Mid Day	Weekday	AZ-260	Westbound	30.9	29.1	9.9	11.8	35	35	35				
260-5	115P06309	3 PM Peak	Weekday	AZ-260	Westbound	31.5	29.9	9.9	8.7	35	35	35				
260-5	115P06309	4 Evening	Weekday	AZ-260	Westbound	32.5	25.8	9.3		35	35	35				
260-5	115P06310	1 AM Peak	Weekday	AZ-260	Westbound	41.7	38.2	22.4	23.6	44	44	44	1.08	1.24	2.19	3.51
260-5	115P06310	2 Mid Day	Weekday	AZ-260	Westbound	40.5	35.5	19.9	12.4	44	44	44				
260-5	115P06310	3 PM Peak	Weekday	AZ-260	Westbound	41.8	35.2	23.6	13.7	44	44	44				
260-5	115P06310	4 Evening	Weekday	AZ-260	Westbound	41.9	40.0	23.6	22.7	44	44	44				
260-5	115P06311	1 AM Peak	Weekday	AZ-260	Westbound	41.0	30.9	14.1	10.6	45	45	45	1.23	1.60	5.17	8.05
260-5	115P06311	2 Mid Day	Weekday	AZ-260	Westbound	36.7	28.2	8.7	5.6	45	45	45				
260-5	115P06311	3 PM Peak	Weekday	AZ-260	Westbound	38.3	30.6	9.9	5.6	45	45	45				
260-5	115P06311	4 Evening	Weekday	AZ-260	Westbound	41.3	37.6	16.5	8.7	45	45	45				
260-5	115P06001	1 AM Peak	Weekday	AZ-260	Westbound	39.2	35.2	15.5	8.7	42	42	42	1.18	1.26	4.10	4.84
260-5	115P06001	2 Mid Day	Weekday	AZ-260	Westbound	35.7	33.9	10.3	9.9	42	42	42				
260-5	115P06001	3 PM Peak	Weekday	AZ-260	Westbound	36.5	33.6	10.6	9.6	42	42	42				
260-5	115P06001	4 Evening	Weekday	AZ-260	Westbound	38.6	36.0	12.4	13.7	42	42	42				

Segment	TMC	timeperiod	week_type	ROAD_NUMBER	road_direction	cars_mean	trucks_mean	cars_P05	trucks_P05	Posted Speed limit	Assumed car free-flow speed	Assumed truck free-flow speed	Cars_PeakTTI	Trucks_PeakTTI	Cars_PeakPTI	Trucks_PeakPTI
60-6	115N06258	1 AM Peak	Weekday	US-60	Westbound	62.6	50.5	53.2	20.5	65	65	65	1.04	1.29	1.22	3.17
60-6	115N06258	2 Mid Day	Weekday	US-60	Westbound	62.2	51.1	53.5	31.7	65	65	65				
60-6	115N06258	3 PM Peak	Weekday	US-60	Westbound	62.8	51.7	54.2	26.7	65	65	65				
60-6	115N06258	4 Evening	Weekday	US-60	Westbound	63.0	50.6	54.0	26.7	65	65	65				
60-6	115N05945	1 AM Peak	Weekday	US-60	Westbound	48.2	46.1	19.3	9.9	65	65	65	1.38	1.46	5.81	6.54
60-6	115N05945	2 Mid Day	Weekday	US-60	Westbound	47.0	44.4	11.2	10.6	65	65	65				
60-6	115N05945	3 PM Peak	Weekday	US-60	Westbound	51.0	45.1	20.8	12.0	65	65	65				
60-6	115N05945	4 Evening	Weekday	US-60	Westbound	50.6	47.2	19.3	17.1	65	65	65				
60-7	115N06261	1 AM Peak	Weekday	US-60	Westbound	62.7	63.1	39.9	48.5	65	65	65	1.04	1.06	1.77	1.66
60-7	115N06261	2 Mid Day	Weekday	US-60	Westbound	62.9	61.2	36.7	39.9	65	65	65				
60-7	115N06261	3 PM Peak	Weekday	US-60	Westbound	63.8	62.5	38.7	39.3	65	65	65				
60-7	115N06261	4 Evening	Weekday	US-60	Westbound	64.4	62.9	52.1	52.6	65	65	65				
60-7	115N06260	1 AM Peak	Weekday	US-60	Westbound	64.4	61.4	53.7	49.0	65	65	65	1.02	1.07	1.26	1.34
60-7	115N06260	2 Mid Day	Weekday	US-60	Westbound	64.1	61.0	51.6	50.9	65	65	65				
60-7	115N06260	3 PM Peak	Weekday	US-60	Westbound	65.1	61.1	56.1	48.5	65	65	65				
60-7	115N06260	4 Evening	Weekday	US-60	Westbound	64.0	60.5	53.7	49.7	65	65	65				
60-7	115N06442	1 AM Peak	Weekday	US-60	Westbound	63.5	58.2	51.6	31.7	65	65	65	1.02	1.12	1.26	2.05
60-7	115N06642	2 Mid Day	Weekday	US-60	Westbound	64.8	60.3	53.5	43.4	65	65	65				
60-7	115N06642	3 PM Peak	Weekday	US-60	Westbound	65.2	60.3	55.9	45.7	65	65	65				
60-7	115N06642	4 Evening	Weekday	US-60	Westbound	64.1	59.1	52.4	36.6	65	65	65				
60-7	115N06259	1 AM Peak	Weekday	US-60	Westbound	59.0	58.1	49.8	46.4	65	65	65	1.10	1.12	1.32	1.40
60-7	115N06259	2 Mid Day	Weekday	US-60	Westbound	60.8	58.8	51.7	48.6	65	65	65				
60-7	115N06259	3 PM Peak	Weekday	US-60	Westbound	61.0	59.4	51.7	49.8	65	65	65				
60-7	115N06259	4 Evening	Weekday	US-60	Westbound	59.9	58.7	49.2	48.0	65	65	65				
60-7	115N05946	1 AM Peak	Weekday	US-60	Westbound	58.2	60.5	28.6	49.7	64	64	64	1.11	1.06	2.25	1.34
60-7	115N05946	2 Mid Day	Weekday	US-60	Westbound	59.2	60.5	33.2	48.2	64	64	64				
60-7	115N05946	3 PM Peak	Weekday	US-60	Westbound	61.7	61.7	43.7	51.0	64	64	64				
60-7	115N05946	4 Evening	Weekday	US-60	Westbound	61.8	61.4	47.2	52.8	64	64	64				
60-7	115N06258	1 AM Peak	Weekday	US-60	Westbound	62.6	50.5	53.2	20.5	56	56	56	1.00	1.11	1.05	2.72
60-7	115N06258	2 Mid Day	Weekday	US-60	Westbound	62.2	51.1	53.5	31.7	56	56	56				
60-7	115N06258	3 PM Peak	Weekday	US-60	Westbound	62.8	51.7	54.2	26.7	56	56	56				
60-7	115N06258	4 Evening	Weekday	US-60	Westbound	63.0	50.6	54.0	26.7	56	56	56				
60-8	115N05948	1 AM Peak	Weekday	US-60	Westbound	53.7	56.7	20.5	13.7	45	45	45	1.00	1.00	2.50	3.81
60-8	115N05948	2 Mid Day	Weekday	US-60	Westbound	53.9	55.4	19.9	16.8	45	45	45				
60-8	115N05948	3 PM Peak	Weekday	US-60	Westbound	55.6	55.3	19.9	11.8	45	45	45				
60-8	115N05948	4 Evening	Weekday	US-60	Westbound	55.3	55.1	18.0	14.9	45	45	45				
60-8	115N06262	1 AM Peak	Weekday	US-60	Westbound	20.8	21.2			33	33	33	1.62	1.73	No Data	No Data
60-8	115N06262	2 Mid Day	Weekday	US-60	Westbound	20.6	21.5			33	33	33				
60-8	115N06262	3 PM Peak	Weekday	US-60	Westbound	22.5	22.7			33	33	33				
60-8	115N06262	4 Evening	Weekday	US-60	Westbound	20.6	19.3			33	33	33				
60-8	115N05947	1 AM Peak	Weekday	US-60	Westbound	47.3	43.7	20.5	13.7	56	56	56	1.20	1.29	3.12	4.76
60-8	115N05947	2 Mid Day	Weekday	US-60	Westbound	48.0	46.0	19.9	16.8	56	56	56				
60-8	115N05947	3 PM Peak	Weekday	US-60	Westbound	48.2	43.4	19.9	11.8	56	56	56				
60-8	115N05947	4 Evening	Weekday	US-60	Westbound	46.8	43.6	18.0	14.9	56	56	56				
60-8	115N06261	1 AM Peak	Weekday	US-60	Westbound	62.7	63.1	39.9	48.5	65	65	65	1.04	1.06	1.77	1.66
60-8	115N06261	2 Mid Day	Weekday	US-60	Westbound	62.9	61.2	36.7	39.9	65	65	65				
60-8	115N06261	3 PM Peak	Weekday	US-60	Westbound	63.8	62.5	38.7	39.3	65	65	65				
60-8	115N06261	4 Evening	Weekday	US-60	Westbound	64.4	62.9	52.1	52.6	65	65	65				
60-9	115N06263	1 AM Peak	Weekday	US-60	Westbound	62.1	64.4	36.6	56.5	65	65	65	1.05	1.06	1.77	1.56
60-9	115N06263	2 Mid Day	Weekday	US-60	Westbound	64.2	64.0	44.3	56.5	65	65	65				
60-9	115N06263	3 PM Peak	Weekday	US-60	Westbound	65.8	65.2	54.3	58.1	65	65	65				
60-9	115N06263	4 Evening	Weekday	US-60	Westbound	65.5	61.5	55.6	41.7	65	65	65				
60-9	115N05948	1 AM Peak	Weekday	US-60	Westbound	53.7	56.7	16.8	41.9	63	63	63	1.18	1.15	3.77	1.72
60-9	115N05948	2 Mid Day	Weekday	US-60	Westbound	53.9	55.4	19.9	38.6	63	63	63				
60-9	115N05948	3 PM Peak	Weekday	US-60	Westbound	55.6	55.3	28.6	36.7	63	63	63				
60-9	115N05948	4 Evening	Weekday	US-60	Westbound	55.3	55.1	34.8	38.2	63	63	63				

Closure Data

Segment	Length (miles)	# of closures	Total miles of closures		Average Occurrences/Mile/Year	
			EB	WB	EB	WB
260-1	5	14	4.0	46.0	0.16	1.84
260-2	13	10	0.0	94.0	0.00	1.45
260-13	14	18	35.6	102.0	0.51	1.46
260 60-4	8	20	46.2	31.7	1.16	0.79
260-5	16	19	4.0	113.0	0.05	1.41
60-6	7	14	68.1	5.3	1.95	0.15
60-7	32	44	528.0	12.0	3.30	0.08
60-8	5	19	61.5	5.0	2.46	0.20
60-9	13	13	147.8	12.0	2.27	0.18

Segment	ITIS Category Description											
	Closures		Incidents/Accidents		Incidents/Crashes		Obstruction Hazards		Winds		Winter Storm Codes	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
260-1	0	0	4	1	0	0	0	0	0	0	0	9
260-2	0	0	0	3	0	0	0	0	0	0	0	7
260-13	0	0	4	4	0	0	0	0	0	0	3	7
260 60-4	0	0	0	0	0	0	1	2	0	0	10	7
260-5	0	0	4	8	0	0	0	0	0	0	0	7
60-6	0	0	1	1	0	0	1	2	0	0	9	0
60-7	0	0	12	4	0	0	0	1	0	0	26	1
60-8	0	0	1	0	0	0	2	0	0	0	15	1
60-9	0	0	0	0	0	0	2	0	0	0	10	1

HPMS Data

SEGMENT	MP_FROM	MP_TO	WEIGHTED AVERAGE EB AADT	WEIGHTED AVERAGE WB AADT	WEIGHTED AVERAGE AADT	EB AADT	WB AADT	2015 AADT	K Factor	D-Factor	T-Factor
260-1	306	310	2437	2494	4931	2725	2776	5501	11	50	14
260-2	310	323	1383	1383	2767	1622	1622	3245	11	50	14
260-13	323	337	2277	2180	4458	2024	2159	4185	14	51	13
260 60-4	337	345	8864	8680	17544	9816	9109	18925	12	53	9
260-5	357	341	9074	9291	18366	10204	10004	20209	13	51	8
60-6	345	352	2659	2641	5300	2595	2394	4989	8	52	11
60-7	352	384	1016	1033	2049	1109	1151	2261	9	51	12
60-8	384	389	1839	1864	3703	2069	2204	4273	10	52	10
60-9	389	402	316	315	631	319	321	640	10	50	18

SEGMENT	Loc ID	BMP	EMP	Length	Pos Dir AADT	Neg Dir AADT	Corrected Pos Dir AADT	Corrected Neg Dir AADT	2015 AADT	K Factor	D-Factor	D-Factor Adjusted	T-Factor
260-1	101514	306.00	307.98	1.98	3477	3581	3477	3581	7058	12	51	51	12
	101516	307.98	309.49	1.51	2113	2291	2113	2113	4226	10	58	50	15
	101518	309.49	310.00	0.51	0	0	1617	1617	3233	11	58	50	14
260-2	101518	310.00	322.09	12.09	0	0	1617	1617	3233	11	58	50	14
	102312	322.09	323.00	0.91	0	0	1701	1701	3402	13	64	50	13
260-3	101519	323.00	332.94	9.94	2078	2143	2078	2143	4223	14	70	51	12
	102312	322.09	327.11	5.02	0	0	1701	1701	3402	13	64	50	13
	101519	327.11	332.94	5.83	2078	2143	2078	2143	4223	14	70	51	12
	101520	332.94	337.00	4.06	2214	2789	2214	2789	5003	13	60	56	15
260 60-4	101520	337.00	337.17	0.17	2214	2789	2214	2789	5003	13	60	56	15
	101521	337.17	340.07	2.90	6723	5898	6723	5898	12621	11	56	53	9
	101522	341.68	342.60	0.92	10104	7688	10104	7688	17793	10	55	57	7
	101524	342.60	345.00	2.40	15773	21350	13981	13981	27962	14	62	50	8
260-5	101522	341.00	342.60	1.60	10104	7688	10104	7688	17793	10	55	57	7
	101524	342.60	345.73	3.13	15773	21350	13981	13981	27962	14	62	50	8
	101526	345.73	350.67	4.94	11042	11177	11042	11177	22219	12	51	50	9
	101528	350.67	353.54	2.87	9364	12787	11929	11929	23858	13	57	50	9
	101530	353.54	357.00	3.46	4330	4223	4208	4208	8415	15	68	50	5
60-6	101938	345.00	347.15	2.15	0	0	2204	2204	4407	9	58	50	12
	101939	347.15	352.00	4.85	2768	2479	2768	2479	5247	8	63	53	11
60-7	101940	352.00	356.37	4.37	0	0	1916	1916	3832	7	50	50	11
	101941	356.37	361.31	4.94	0	0	1257	1257	2514	10	65	50	10
	101942	361.31	363.30	1.99	0	0	1149	1149	2298	10	64	50	10
	101943	363.30	384.00	20.70	899	965	899	965	1865	9	58	52	13
60-8	101944	384.00	387.83	3.83	1946	2121	1946	2121	4067	10	69	52	9
	101945	387.83	388.70	0.87	3061	2316	3061	3061	6122	12	63	50	12
	101947	388.70	389.00	0.30	767	770	767	770	1539	12	55	50	14
60-9	101948	389.00	402.00	13.00	319	321	319	321	640	10	52	50	18

Bicycle Accommodation Data

Segment	BMP	EMP	Divided or Non	NB/EB Right Shoulder Width	SB/WB Right Shoulder Width	NB/EB Left Shoulder Width	SB/WB Left Shoulder Width	NB/EB Effective Length of Shoulder	SB/WB Effective Length of Shoulder	% Bicycle Accommodation
260-1	305.67	310	Undivided	7.7	7.8	N/A	N/A	4.0	4.0	93%
260-2	310	323	Undivided	5.0	5.0	N/A	N/A	0.0	0.0	0%
260-3	323	337	Undivided	5.0	4.8	N/A	N/A	0.8	0.6	5%
260 60-4	337	345	Undivided	2.5	3.0	N/A	N/A	3.5	5.2	54%
260-5	341	357	Undivided	3.0	2.6	N/A	N/A	8.4	7.7	50%
60-6	345	352	Undivided	5.0	5.0	N/A	N/A	0.0	0.0	0%
60-7	352	384	Undivided	2.4	2.4	N/A	N/A	1.5	1.5	5%
60-8	384	389	Undivided	7.9	8.0	N/A	N/A	4.8	4.9	98%
60-9	389	402	Undivided	7.2	7.5	N/A	N/A	13.0	13.0	100%

AZTDM Data

SEGMENT	Growth Rate	% Non-SOV
260-1	-0.87%	16.8%
260-2	-0.04%	13.9%
260-3	0.44%	17.3%
260 60-4	2.03%	17.9%
260-5	2.11%	16.4%
60-6	1.34%	12.2%
60-7	0.42%	13.8%
60-8	1.50%	16.9%
60-9	-0.15%	0.0%

HERS Capacity Calculation Data

Segment	Capacity Environment Type	Facility Type	Terrain	Lane Width	EB Rt. Shoulder	WB Rt. Shoulder	F _{lw} or f _w or f _{LS}	EB F _{lc}	WB F _{lc}	Total Ramp Density	PHF	E _T	f _{HV}	f _M	f _A	g/C	f _G	f _{NP}	N _m	f _p	EB FFS	WB FFS	EB Peak-Hour Capacity	WB Peak-Hour Capacity	Major Direction Peak-Hour Capacity	Daily Capacity
260-1	2	Rural	Rolling	12.00	7.74	7.78	0.0	0	0	N/A	0.88	2.5	0.826	1.6	4.27	N/A	N/A	N/A	N/A	N/A	39.13	39.13	2593	2593	N/A	49,387
260-2	4	Rural	Mountainous	12.00	5.00	5.00	0.0	N/A	N/A	N/A	0.88	7.2	0.535	N/A	0.81	N/A	0.62	4	3.30	N/A	74.19	74.19	N/A	N/A	581.37	11,074
260-3	4	Rural	Level	12.00	4.97	4.85	0.0	N/A	N/A	N/A	0.88	1.4	0.951	N/A	1.79	N/A	1	4	2.80	N/A	66.21	66.21	N/A	N/A	1261.99	24,038
260 60-4	3	Rural	Mountainous	12.00	2.48	3.02	1.0	N/A	N/A	N/A	0.92	2	0.917	N/A	N/A	0.55	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1764.04	33,601
260-5	3	Rural	Rolling	12.00	2.99	2.59	1.0	N/A	N/A	N/A	0.92	2	0.926	N/A	N/A	0.55	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1780.37	33,912
60-6	4	Rural	Rolling	12.00	5.00	5.00	0.0	N/A	N/A	N/A	0.88	2.3	0.875	N/A	13.1	N/A	0.75	9	4.10	N/A	61.89	61.89	N/A	N/A	661.99	12,609
60-7	4	Rural	Mountainous	12.00	2.41	2.42	2.6	N/A	N/A	N/A	0.88	7.2	0.573	N/A	0.03	N/A	0.55	7	2.90	N/A	71.37	71.37	N/A	N/A	509.07	9,697
60-8	3	Rural	Rolling	12.00	7.91	8.03	1.0	N/A	N/A	N/A	0.9	2	0.909	N/A	N/A	0.55	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	998.64	19,022
60-9	4	Rural	Rolling	12.00	7.18	7.50	0.0	N/A	N/A	N/A	0.88	2.7	0.766	N/A	2.56	N/A	0.67	4	2.20	N/A	72.44	72.44	N/A	N/A	879.71	16,756

Safety Performance Area Data

Segment	Operating Environment	Segment Length (miles)	EB Fatal Crashes 2010-2014	WB Fatal Crashes 2010-2014	EB Incapacitating Injury Crashes	WB Incapacitating Injury Crashes	Fatal + Incapacitating Injury Crashes Involving SHSP Top 5 Emphasis Areas Behaviors
260-1	4 or 5 Lane Undivided Highway	4.33	0	0	0	1	1
260-2	2 or 3 Lane Undivided Highway	13	0	1	0	1	2
260-3	2 or 3 Lane Undivided Highway	14	1	0	4	5	8
260 60-4	4 or 5 Lane Undivided Highway	8	1	1	6	8	3
260-5	4 or 5 Lane Undivided Highway	16	2	1	10	7	5
60-6	2 or 3 Lane Undivided Highway	7	0	0	3	1	2
60-7	2 or 3 or 4 Lane Divided Highway	32	3	1	8	2	9
60-8	4 or 5 Lane Undivided Highway	5	0	0	0	0	0
60-9	2 or 3 Lane Undivided Highway	13	0	0	0	0	0

Segment	Operating Environment	Fatal + Incapacitating Injury Crashes Involving Trucks	Fatal + Incapacitating Injury Crashes Involving Motorcycles	Fatal + Incapacitating Injury Crashes Involving Non-Motorized Travelers	Weighted 5-Year (2011-2015) Average EB AADT	Weighted 5-Year (2011-2015) Average WB AADT	Weighted 5-Year (2011-2015) Average Total AADT
260-1	4 or 5 Lane Undivided Highway	0	0	0	1698	1713	3410
260-2	2 or 3 Lane Undivided Highway	0	0	0	1259	1259	2518
260-3	2 or 3 Lane Undivided Highway	2	0	0	2254	2130	4384
260 60-4	4 or 5 Lane Undivided Highway	1	1	1	7643	7295	14938
260-5	4 or 5 Lane Undivided Highway	0	0	3	7675	7870	15546
60-6	2 or 3 Lane Undivided Highway	0	0	0	2665	2646	5310
60-7	2 or 3 or 4 Lane Divided Highway	2	1	0	1059	1081	2140
60-8	4 or 5 Lane Undivided Highway	0	0	0	1808	1828	3637
60-9	2 or 3 Lane Undivided Highway	0	0	0	316	315	631

HPMS Data

2011-2015 Weighted Average						2015			2014			2013			2012			2011		
SEGMENT	MP_FROM	MP_TO	WEIGHTED AVERAGE EB AADT	WEIGHTED AVERAGE WB AADT	WEIGHTED AVERAGE AADT	EB AADT	WB AADT	2015 AADT	EB AADT	WB AADT	2014 AADT	EB AADT	WB AADT	2013 AADT	EB AADT	WB AADT	2012 AADT	EB AADT	WB AADT	2011 AADT
260-1	306	310	2437	2494	4931	2725	2776	5501	2491	2639	5130	2559	2640	5199	2359	2364	4723	2051	2051	4101
260-2	310	323	1383	1383	2767	1622	1622	3245	1526	1526	3052	1571	1571	3142	1266	1266	2532	931	931	1862
260-3	323	337	2277	2180	4458	2024	2159	4185	1950	2081	4031	1856	1795	3651	2868	2177	5045	2688	2688	5377
260 60-4	337	345	8864	8680	17544	9816	9109	18925	9221	9089	18309	9188	9095	18283	10462	10379	20840	5634	5726	11360
260-5	357	341	9074	9291	18366	10204	10004	20209	9004	10063	19067	9714	9916	19631	9977	9985	19962	6472	6488	12960
60-6	345	352	2659	2641	5300	2595	2394	4989	2528	2611	5139	2736	2765	5500	2721	2721	5442	2716	2716	5431
60-7	352	384	1016	1033	2049	1109	1151	2261	1076	1117	2193	1031	1031	2063	941	941	1881	924	924	1847
60-8	384	389	1839	1864	3703	2069	2204	4273	1996	2122	4118	1846	1713	3558	1678	1678	3356	1605	1605	3211
60-9	389	402	316	315	631	319	321	640	323	302	626	248	266	515	373	373	746	315	315	630

Freight Performance Area Data

Segment	Length (miles)	# of closures	Total minutes of closures		Avg Mins/Mile/Year	
			EB	WB	EB	WB
260-1	5	14	658.0	74235.0	26.32	2969.40
260-2	13	10	0.0	140063.0	0.00	2154.82
260-3	14	18	85833.2	149803.0	1226.19	2140.04
260 60-4	8	20	76963.4	40079.6	1924.09	1001.99
260-5	16	19	504.0	212128.0	6.30	2651.60
60-6	7	14	107051.9	1307.6	3058.62	37.36
60-7	32	44	892479.3	9835.0	5578.00	61.47
60-8	5	19	109592.7	7255.0	4383.71	290.20
60-9	13	13	265272.1	17412.0	4081.11	267.88

Segment	ITIS Category Description											
	Closures		Incidents/Accidents		Incidents/Crashes		Obstruction Hazards		Winds		Winter Storm Codes	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
260-1	0	0	4	1	0	0	0	0	0	0	0	9
260-2	0	0	0	3	0	0	0	0	0	0	0	7
260-3	0	0	4	4	0	0	0	0	0	0	3	7
260 60-4	0	0	0	0	0	0	1	2	0	0	10	7
260-5	0	0	4	8	0	0	0	0	0	0	0	7
60-6	0	0	1	1	0	0	1	2	0	0	9	0
60-7	0	0	12	4	0	0	0	1	0	0	26	1
60-8	0	0	1	0	0	0	2	0	0	0	15	1
60-9	0	0	0	0	0	0	2	0	0	0	10	1

See the **Mobility Performance Area Data** section for other Freight Performance Area related data.

Appendix D: Needs Analysis Contributing Factors and Scores

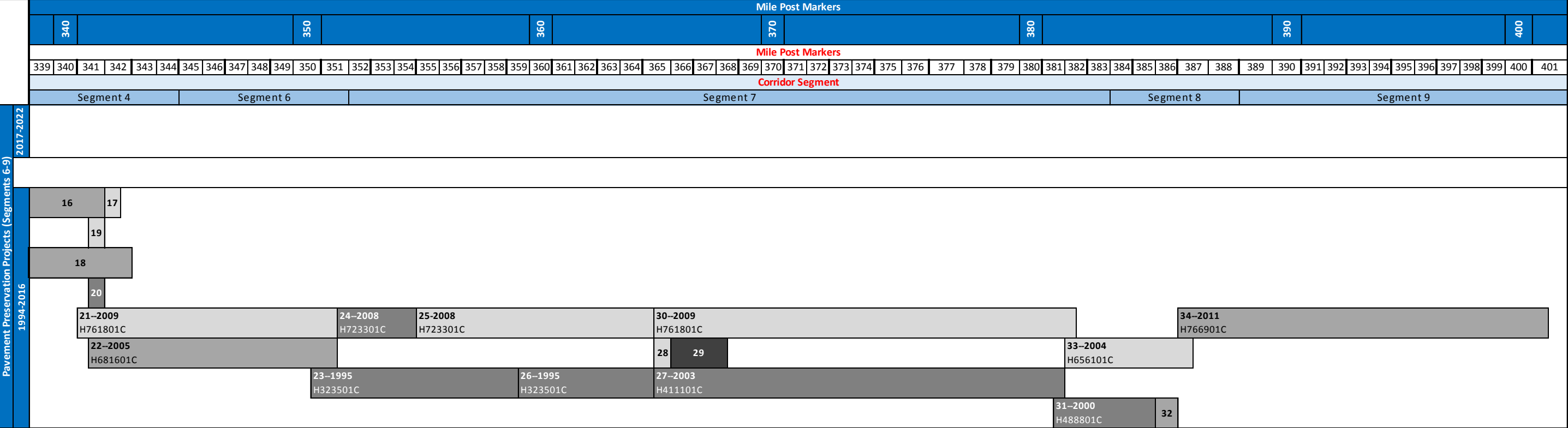
Pavement Performance Needs Analysis

Segment	Segment Length (miles)	Segment Mileposts (MP)	Final Need	Bid History Investment	PeCos History Investment	Resulting Historical Investment	Contributing Factors and Comments
260-1	4	306-310	High	Medium	Low	Medium	Hot Spots: MP 307-310
260-2	13	310-323	Low	Medium	Low	Medium	Hot Spots: MP 310-311
260-3	14	323-337	None	Medium	Low	Medium	No need identified
260 60-4	8	337-345	High	Low	Low	Low	Hot Spots: MP 342-344 Programmed Projects: FY20 Pavement Rehabilitation: Apache Sitgreaves to SR 61 (ADOT Five-Year Transportation Facilities Construction Program 2018 – 2022, MP 337-341)
260-5	16	341-357	Low	Low	Medium	Low	Hot Spots: MP 342-343, MP 344-345, MP 351-352, MP 354-355 Programmed Projects: FY21 Pavement Rehabilitation: Apache Sitgreaves to SR 61 (ADOT Five-Year Transportation Facilities Construction Program 2018 – 2022, MP 341-353)
60-6	7	345-352	None	Medium	High	High	No need identified
60-7	32	352-384	Low	Medium	Medium	Medium	Hot Spots: MP 353-354, MP 357-358, MP 359-360, MP 361-362, MP 366-367, MP 375-377
60-8	5	384-389	None	Low	High	Medium	No need identified
60-9	13	389-402	None	Low	Low	Low	No need identified

Pavement History

SR-260 Pavement History																																																			
	Mile Post Markers																																																		
	305						310						320						330						340						345						355														
	Mile Post Markers																																																		
	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355
Corridor Segment																																																			
					Segment 1										Segment 2										Segment 3										Segment 4					Segment 5											
2017-2022																										FY20: Pavement Rehabilitation										FY21: Pavement Rehabilitation															
Pavement Preservation Projects (Segments 1-5)	1994-2016	1	2	3	4-2000 H563501C EB/WB: 0.5" FC										13-2014 H812901C EB/WB: 3" RE, 3" AC, 0.3" SC																				38																
					5-2004 H585901C EB/WB: 3.5" RE, 3" AC, 0.5" FR																				41 41 41 41																										
					6-2009 H761801C EB/WB: 0" FL																				39																										
							7	8	7		9											37																													
							10		11-2012 H770501C EB/WB: 0.5" RE, 0.5" FR										12-2012 H835301C EB/WB: 0" MS															40																	
												14-2001 H500801C EB/WB: 2" RE, 2" AC										35					36					35																			
												15-2003 H561901C EB/WB: 0.5" FR																														42									

US-60 Pavement History



Pavement Treatment Reference Numbers	Pavement Treatment Reference Numbers	Pavement Treatment Reference Numbers
1. 2003 (EB/WB) H460401C: 12" AB, 3" AC, 2" AR	15. 2003 (EB/WB) H561901C: 0.5" FR	29. 2004 (EB/WB) H355201C: 8" AB, 6" AC, 0.5" FR
2. 2003 (EB/WB) H460401C: 14" AB, 4" AC, 2" AR	16. 1996 (EB/WB) H360901C: Remove 2", New 2" AR, 0.5" FR	30. 2009 (EB/WB) H761801C: 0" FL
3. 2003 (EB/WB) H460401C: 2" AR	17. 1996 (EB/WB) H360901C: Remove 0.5", New 0.5" FR	31. 2000 (EB/WB) H488801C: Remove 2", New 2" AC, 2" AR
4. 2000 (EB/WB) H563501C: 0.5" FC	18. 2008 (EB/WB) H681601C: Remove 3", New 2.5" AC, 0.5" FR	32. 2000 (EB/WB) H488801C: Remove 2.5", New 2.5" AR
5. 2004 (EB/WB) H585901C: Remove 3.5", New 3" AC, 0.5" FR	19. 2004 (EB/WB) H531301C: 0.6" DC	33. 2004 (EB/WB) H656101C: 0.5" FR
6. 2009 (EB/WB) H761801C: 0" FL	20. 2009 (EB/WB) H466301C: 10" AC, 0.5" FC	34. 2011 (EB/WB) H766901C: Remove 2.5", New 2.5" AC, 0.3" SC
7. 2007 (EB/WB) H460301C: Remove 0.5", New 0.5" FR	21. 2009 (EB/WB) H761801C: 0" FL	35. 2001 (EB/WB) H490501C: Remove 4.5", New 4" AC, 0.5" FR
8. 2007 (EB/WB) H460301C: 12" AB, 5" AC, 0.5" FC	22. 2008 (EB/WB) H681601C: Remove 3", New 2.5" AC, 0.5" FR	36. 2001 (EB/WB) H490501C: Remove 2.5", New 2" AC, 0.5" FR
9. 2012 (EB/WB) H770501C: 13" AB, 4" AC, 0.5" FR	23. 1995 (EB/WB) H323501C: 2.5" AC, 0.5" FR	37. 2004 (EB/WB) H531301C: Remove 3", New 3" AC, 0.6" DC
10. 1999 (EB/WB) H537801C: Remove 4", 4" AC	24. 2008 (EB/WB) H723301C: 2.5" AC, 0.5" FR	38. 2013 (EB/WB) H855101C: Remove 3", New 3" AC, 0" SR
11. 2012 (EB/WB) H770501C: Remove 0.5", New 0.5" FR	25. 2008 (EB/WB) H723301C: 0.5" FR	39. 2009 (EB/WB) H761801C: 0" FL
12. 2012 (EB/WB) H835301C: 0" MS	26. 1995 (EB/WB) H323501C: 2" AC, 0.5" FR	40. 2003 (EB/WB) H435701C: Remove 4", New 5" AC, 0.5" FR
13. 2014 (EB/WB) H812901C: Remove 3", New 3" AC, 0.3" SC	27. 2003 (EB/WB) H411101C: Remove 2", New 4" AC, 0.5" FR	41. 2011 (EB/WB) H818401C: Remove 3.5", New 3" AC, 0.5" FC
14. 2001 (EB/WB) H500801C: Remove 2", New 2" AC	28. 2004 (EB/WB) H355201C: Remove 0.5", New 0.5" FR	42. 1998 (EB/WB) HX05301C: 0.3" SC, 0" FL

Legend

New Paving or Reconstruction

Mill and Overlay (Adding Structural Thickness)

Mill and Replace (No Change Structural Thickness)

Fog Coat or Thin Overlay Treatments

PCCP Pavement Border

AC Pavement Border

Value	Level	Segment Number																	
		1		2		3		4		5		6		7		8		9	
		Uni-Dir	Bi-Dir	Uni-Dir	Bi-Dir	Uni-Dir	Bi-Dir	Uni-Dir	Bi-Dir	Uni-Dir	Bi-Dir	Uni-Dir	Bi-Dir	Uni-Dir	Bi-Dir	Uni-Dir	Bi-Dir	Uni-Dir	Bi-Dir
1	L1				85%		57%		20%		19%		93%		2%		70%		
1					85%		43%		10%		3%				6%				
1					19%		50%		5%						42%				
1					50%				5%						53%				
1									20%										
3	L2				85%		54%		10%		6%		93%				40%		
3					15%		50%		30%		22%						20%		
3									40%		3%								
3									35%		19%								
3											13%								
3																			
4	L3		10%				5%		5%		19%		21%		19%		40%		96%
4													7%		23%				
4															5%				
4															52%				
4															9%				
6	L4		80%		8%										8%				
6					4%														
6																			
6																			
6																			
6																			
6																			
Sub-Total		0.0	5.2	0.0	6.1	0.0	4.8	0.0	4.3	0.0	2.9	0.0	4.9	0.0	5.8	0.0	4.1	0.0	3.8
Total		5.2		6.1		4.8		4.3		2.9		4.9		5.8		4.1		3.8	

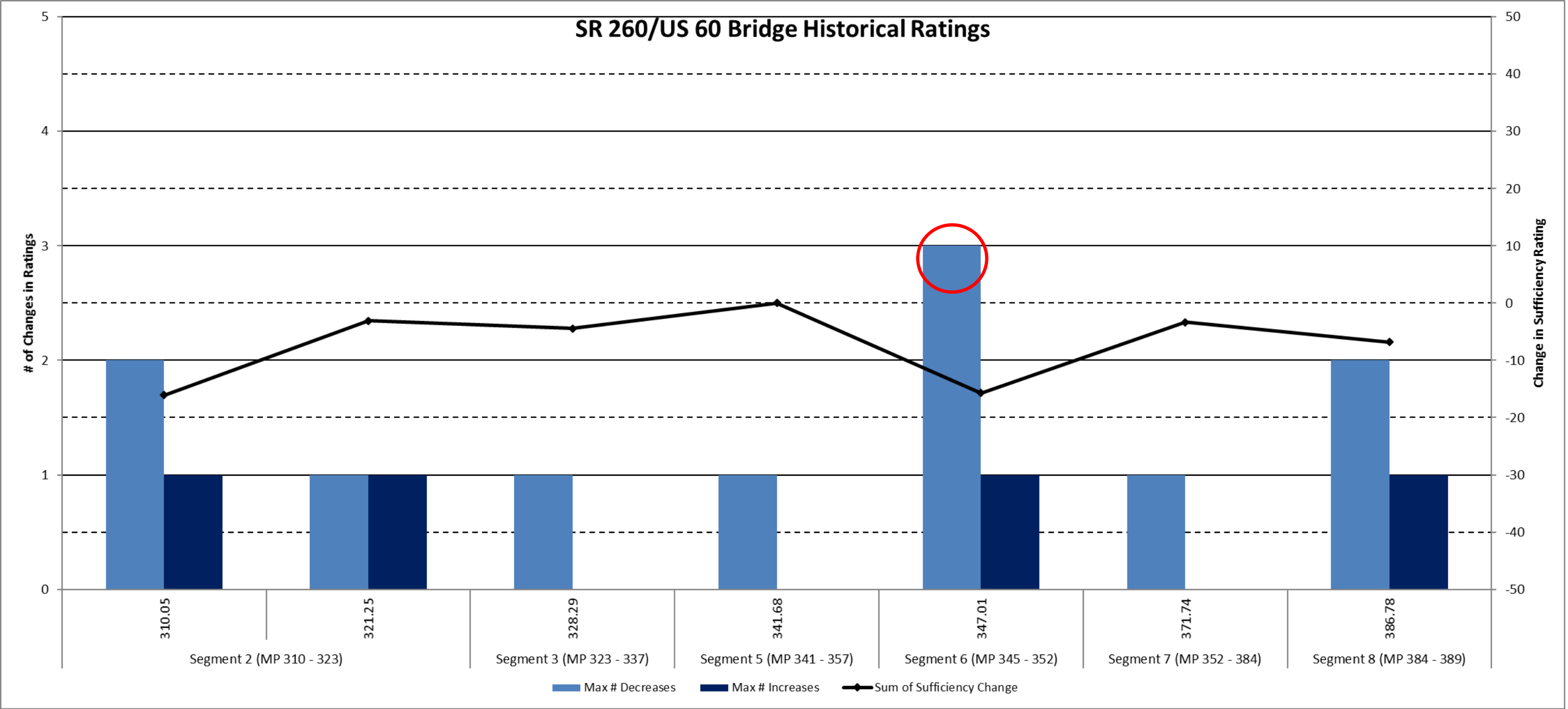
Pavement Historical Investment

Segment	Pavement History Value (bid projects)	Pavement History Score (bid projects)	Pavement History (bid projects)	PeCos (\$/mile/yr)	PeCos Score	PeCos	Resulting Historical Investment
260-1	5.20	-0.56	Medium	\$143.27	-0.21	Low	Medium
260-2	6.10	-1.59	Medium	\$129.97	10.04	Low	Medium
260-3	4.80	-1.11	Medium	\$620.67	1.64	Low	Medium
260 60-4	4.30	-0.20	Low	\$840.45	0.11	Low	Low
260-5	2.90	-0.60	Low	\$1,643.55	-0.45	Medium	Low
60-6	4.90	0.97	Medium	\$16,488.00	0.13	High	High
60-7	5.80	0.03	Medium	\$2,696.07	0.05	Medium	Medium
60-8	4.10	-1.01	Low	\$19,084.33	-0.38	High	Medium
60-9	3.80	0.11	Low	\$382.24	-0.45	Low	Low

Bridge Performance Needs Analysis

Segment	Segment Length (Miles)	Segment Mileposts (MP)	Number of Bridges in Segment	# Functionally Obsolete Bridges	Final Need	Contributing Factors			Comments
						Bridge	Current Ratings	Historical Review	
260-1	4	306-310	0	None	None	No bridges in segments			
260-2	13	310-323	2	None	None	No bridges with current ratings less than 6 and no historical issues			
260-3	14	323-337	1	None	None	No bridges with current ratings less than 6 and no historical issues			FY19 Construct Scour Retrofit: Mortenson Wash Bridge (#1641) (MP 328)
260 60-4	8	337-345	0	None	None	No bridges with current ratings less than 6 and no historical issues			
260-5	16	341-357	1	None	None	No bridges in segments			
60-6	7	345-352	1	None	None	Rocky Arroyo Bridge (#384) (MP 347.01)	None	Could have a repetitive investment issue	
60-7	32	352-384	1	None	None	No bridges with current ratings less than 6 and no historical issues			
60-8	5	384-389	1	None	None	No bridges with current ratings less than 6 and no historical issues			
60-9	13	389-402	0	None	None	No bridges in segments			

Bridge Ratings History



identifies the bridge indicated is of concern from a historical ratings perspective

Maximum # of Decreases: Maximum number of times that the Deck Rating, Substructure Rating, or Superstructure Rating decreased from 1997 to 2014. (Higher number could indicate a more dramatic decline in the performance of the bridge)

Maximum # of Increases: Maximum number of times that the Deck Rating, Substructure Rating, or Superstructure Rating increased from 1997 to 2014. (Higher number could indicate a higher level of investment)

Change in Sufficiency Rating: Cumulative change in Sufficiency Rating from 1997 to 2014. (Bigger negative number could indicate a more dramatic decline in the performance of the bridge)

Mobility Performance Needs Analysis

Segment	Segment Mileposts (MP)	Segment Length (miles)	Final Need	Roadway Variables								Traffic Variables					Relevant Mobility Related Existing Infrastructure
				Functional Classification	Environmental Type (Urban/Rural)	Terrain	# of Lanes/ Direction	Weighted Average Speed Limit	Aux Lanes	Divided/ Non-Divided	% No Passing	Existing LOS	Future 2035 LOS	% Trucks	NB Buffer Index (PTI-TTI)	SB Buffer Index (PTI-TTI)	
260-1	306-310	4	Low	State Highway	Rural	Rolling	4	45	No	Non-Divided	0%	A/B	A/B	14%	1.76	0.84	
260-2	310-323	13	Low	State Highway	Rural	Level	2	65	No	Non-Divided	30%	A/B	A/B	14%	0.29	0.41	
260-3	323-337	14	Low	State Highway	Rural	Level	2	58	No	Non-Divided	30%	A/B	A/B	13%	0.19	0.47	Existing DMS EB MP 335.17
260 60-4	337-345	8	Medium	State Highway	Rural	Rolling	4	38	No	Non-Divided	0%	A/B	C	11%	2.29	3.96	Existing DMS EB MP 339.9; DMS WB MP 339.9
260-5	341-357	16	Medium	State Highway	Rural	Rolling	4	41	No	Non-Divided	0%	C	C	7%	1.48	2.48	
60-6	345-352	7	Medium	State Highway	Rural	Level	2	65	No	Non-Divided	50%	A/B	A/B	11%	0.88	2.31	
60-7	352-384	32	Low	State Highway	Rural	Level	2	64	No	Non-Divided	30%	A/B	A/B	12%	0.93	0.45	
60-8	384-389	5	Low	State Highway	Rural	Rolling	2	39	No	Non-Divided	30%	A/B	A/B	10%	2.94	7.35	
60-9	389-402	13	Low	State Highway	Rural	Level	2	65	No	Non-Divided	40%	A/B	A/B	18%	1.09	1.72	

Mobility Performance Needs Analysis (continued)

Segment	Segment Mileposts (MP)	Segment Length (miles)	Final Need	Closure Extent							Non-Actionable Conditions	Programmed and Planned Projects or Issues from Previous Documents Relevant to Final Need	Contributing Factors
				Total Number of Closures	# Incidents/Accidents	% Incidents/Accidents	# Obstructions/Hazards	% Obstructions/Hazards	# Weather Related	% Weather Related			
260-1	306-310	4	Low	14	5	36%	0	0%	9	64%		Programmed: None Planned: None	- High percentage of closures due to weather conditions, primarily in the WB direction. - Four long duration closures.
260-2	310-323	13	Low	10	3	30%	0	0%	7	70%		Programmed: None Planned: None	- High percentage of closures due to weather conditions, all in the WB direction. - Four long duration closures
260-3	323-337	14	Low	18	7	39%	0	0%	11	61%		Programmed: None Planned: Intersection Signal: SR 260 and future relocation of Lone Pine Dam Road (Southern Navajo/Apache County Sub Regional Transportation Plan, MP 335)	- High percentage of closures due to weather conditions, primarily in the WB direction. - Five long duration closures related to weather conditions.
260 60-4	337-345	8	Medium	20	0	0%	3	15%	17	85%		Programmed: None Planned: Roadway Widening to 4-lane Divided Highway from Heber-Overgaard to Show Low (Payson-Show Low Highway, SR 260, Overgaard to US 60 MP 309.4-340.1, DCR, 2014) Grade Separated TI: US 60 and SR 77 Intersection Signals: US 60 and Future Woolford Extension; US 60 and Ski Hi Road Future Extension (Southern Navajo/Apache County Sub Regional Transportation Plan) Exclusive WB turn lane toward 27th Place (MP 342.5) and exclusive EB right turn lane at 40th Street intersection (Roadway Capacity and Turn Lane Analysis: US 60 between SR 77 and Little Mormon Lake Road Show Low, Arizona, MP 343.3)	- High percentage of closures due to weather conditions. - Five long duration closures from MP 337-341 (both EB and WB) and four long duration closures from MP 340-345 (EB).
260-5	341-357	16	Medium	19	12	63%	0	0%	7	37%		Programmed: None Planned: None	- High percentage of closures due to incidents/accidents. - Five long duration closures due to weather conditions from MP 342-357 (WB) - High number of access points per

Segment	Segment Mileposts (MP)	Segment Length (miles)	Final Need	Closure Extent							Non-Actionable Conditions	Programmed and Planned Projects or Issues from Previous Documents Relevant to Final Need	Contributing Factors
				Total Number of Closures	# Incidents/Accidents	% Incidents/Accidents	# Obstructions/Hazards	% Obstructions/Hazards	# Weather Related	% Weather Related			
													mile (approx 50). - Approx. 50% of segment has no passing conditions.
60-6	345-352	7	Medium	14	2	14%	3	21%	9	64%		Programmed: None Planned: EB/WB Passing Lanes-Tier 1 (ADOT Climbing and Passing Lane Prioritization Study, MP 345-348) Proposed WB DMS (Arizona Statewide Dynamic Message Master Plan, MP 345) EB/WB Shoulder Improvement (Statewide Shoulders Study, MP 346-352) Intersection Signal: US 60 and Bourdon Ranch Road (Southern Navajo/Apache County Sub Regional Transportation Plan, MP 347)	- High percentage of closures due to weather conditions, all in EB direction. - Six long duration closures due to weather conditions, all from MP 345-352/353 (EB) - Small data set for travel times.
60-7	352-384	32	Low	44	16	36%	1	2%	27	61%		Programmed: None Planned: EB/WB Shoulder Improvement (Statewide Shoulders Study, MP 352-353, MP 358-369) EB Passing Lane-Tier 1 (ADOT Climbing and Passing Lane Prioritization Study, MP 357-260) Stop Controlled Intersection: US 60 and Future Vernon-McNary Road (Southern Navajo/Apache County Sub Regional Transportation Plan, MP 360.6)	- High percentage of closures due to weather conditions, mostly in the EB direction. - 20 long duration closures related to weather (19 of which in the EB direction)
60-8	384-389	5	Low	19	1	5%	2	11%	16	84%		Programmed: None Planned: Proposed WB DMS (Arizona Statewide Dynamic Message Master Plan, MP 385)	- High percentage of closures due to weather conditions, primarily in the EB direction. - 11 long duration closures
260-9	389-402	13	Low	13	0	0%	2	15%	11	85%		Programmed: None Planned: None	- High percentage of closures due to weather conditions, primarily in the EB direction. - Eight long duration closures

Safety Performance Needs Analysis

Segment Number		260-1	260-2	260-3	260 60-4	260-5	60-6	60-7	60-8	60-9	Corridor-Wide Crash Characteristics
Segment Length (miles)		4	13	14	8	16	7	32	5	13	
Segment Milepost (MP)		305.67 - 310	310 - 323	323 - 337	337 - 345	341 - 357	345 - 352	352 - 384	384 - 389	389 - 402	
Final Need		None	Low	Low	Low	None	None	High	None	None	
Segment Crash Overview		0 Crashes were fatal 1 Crashes had incapacitating injuries 0 Crashes involve trucks 0 Crashes involve Motorcycles	1 Crashes were fatal 1 Crashes had incapacitating injuries 0 Crashes involve trucks 0 Crashes involve Motorcycles	1 Crashes were fatal 9 Crashes had incapacitating injuries 2 Crashes involve trucks 0 Crashes involve Motorcycles	2 Crashes were fatal 14 Crashes had incapacitating injuries 1 Crashes involve trucks 1 Crashes involve Motorcycles	3 Crashes were fatal 17 Crashes had incapacitating injuries 0 Crashes involve trucks 0 Crashes involve Motorcycles	0 Crashes were fatal 4 Crashes had incapacitating injuries 0 Crashes involve trucks 0 Crashes involve Motorcycles	4 Crashes were fatal 10 Crashes had incapacitating injuries 2 Crashes involve trucks 1 Crashes involve Motorcycles	0 Crashes were fatal 0 Crashes had incapacitating injuries 0 Crashes involve trucks 0 Crashes involve Motorcycles	0 Crashes were fatal 0 Crashes had incapacitating injuries 0 Crashes involve trucks 0 Crashes involve Motorcycles	11 Crashes were fatal 56 Crashes had incapacitating injuries 5 Crashes involve trucks 2 Crashes involve Motorcycles
Segment Crash Summaries (Fatal and Serious Injury Crashes)	First Harmful Event Type	N/A - Sample Size Too Small	N/A - Sample Size Too Small	20% Involve Collision with Fixed Object 10% Involve Collision with Animal 10% Other Non-Collision	83% Involve Collision with Motor Vehicle 17% Involve Collision with Pedestrian	65% Involve Collision with Motor Vehicle 20% Involve Collision with Pedestrian 10% Involve Collision with Pedalcyclist	N/A - Sample Size Too Small	43% Involve Overturning 14% Involve Collision with Fixed Object 14% Involve Collision with Animal	N/A - Sample Size Too Small	N/A - Sample Size Too Small	17% Involve Overturning 10% Involve Collision with Fixed Object 38% Involve Single Vehicle
	Collision Type	N/A - Sample Size Too Small	N/A - Sample Size Too Small	60% Involve Single Vehicle 10% Involve Rear End 10% Involve Sideswipe (same)	33% Involve Left Turn 17% Involve Head On 17% Involve Other	25% Involve Other 20% Involve Left Turn 10% Involve Head On	N/A - Sample Size Too Small	79% Involve Single Vehicle 7% Involve Angle 7% Involve Sideswipe (same)	N/A - Sample Size Too Small	N/A - Sample Size Too Small	16% Involve Other 10% Involve Left Turn 21% Involve Speed too Fast for Conditions
	Violation or Behavior	N/A - Sample Size Too Small	N/A - Sample Size Too Small	30% Involve Speed too Fast for Conditions 20% Involve Failure to Keep in Proper Lane 10% Involve Exceeded Lawful Speed	50% Involve Failure to Yield Right-of-Way 17% Involve Inattention/ Distraction 17% Did Not Use Crosswalk	30% Involve Failure to Yield Right-of-Way 15% Involve Did Not Use Crosswalk 10% Involve Failure to Keep in Proper Lane	N/A - Sample Size Too Small	50% Involve Speed too Fast for Conditions 29% Involve Failure to Keep in Proper Lane 7% Failure to Yield Right-of-Way	N/A - Sample Size Too Small	N/A - Sample Size Too Small	19% Involve Failure to Yield Right-of-Way 14% Involve Failure to Keep in Proper Lane 72% Occur in Daylight Conditions
	Lighting Conditions	N/A - Sample Size Too Small	N/A - Sample Size Too Small	60% Occur in Daylight Conditions 30% Occur in Dark-Unlighted Conditions 10% Occur in Dusk Conditions	83% Occur in Daylight Conditions 17% Occur in Dark-Lighted Conditions	75% Occur in Daylight Conditions 20% Occur in Dark-Unlighted Conditions 5% Occur in Dark-Lighted Conditions	N/A - Sample Size Too Small	79% Occur in Daylight Conditions 21% Occur in Dark-Unlighted Conditions	N/A - Sample Size Too Small	N/A - Sample Size Too Small	22% Occur in Dark-Unlighted Conditions 3% Occur in Dark-Lighted Conditions 88% Involve Dry Conditions
	Surface Conditions	N/A - Sample Size Too Small	N/A - Sample Size Too Small	90% Involve Dry Conditions 10% Involve Wet Conditions	100% Involve Dry Conditions	95% Involve Dry Conditions 5% Involve Ice/Frost Conditions	N/A - Sample Size Too Small	7% Involve Slush Conditions 7% Involve Wet Conditions 7% Involve Ice/Frost Conditions	N/A - Sample Size Too Small	N/A - Sample Size Too Small	7% Involve Wet Conditions 3% Involve Ice/Frost Conditions 41% Involve a first unit event of Motor Vehicle in Transport
	First Unit Event	N/A - Sample Size Too Small	N/A - Sample Size Too Small	40% Involve a first unit event of Ran Off the Road (Right) 10% Involve Collision with Animal 10% Involve Crossed Median	83% Involve a first unit event of Motor Vehicle in Transport 17% Involve a first unit event of Crossed Centerline	75% Involve a first unit event of Motor Vehicle in Transport 15% Involve a first unit event of Collision with Pedestrian 5% Involve a first unit event of Crossed Centerline	N/A - Sample Size Too Small	64% Involve a first unit event of Ran Off the Road (Right) 7% Involve a Collision of Ran of the Road (Left) 7% Involve a first unit event of Collision with Animal	N/A - Sample Size Too Small	N/A - Sample Size Too Small	28% Involve a first unit event of Ran Off the Road (Right) 12% Involve a first unit event of Crossed Centerline 62% No Apparent Influence
	Driver Physical Condition	N/A - Sample Size Too Small	N/A - Sample Size Too Small	40% No Apparent Influence 30% Under the Influence of Drugs or Alcohol 20% Fatigued/Fell Asleep	67% No Apparent Influence 33% Under the Influence of Drugs or Alcohol	60% No Apparent Influence 25% Unknown 10% Under the Influence of Drugs or Alcohol	N/A - Sample Size Too Small	71% No Apparent Influence 7% Under the Influence of Medicaton 7% Fatigued/Fell Asleep	N/A - Sample Size Too Small	N/A - Sample Size Too Small	16% Under the Influence of Drugs or Alcohol 12% Unknown 59% Shoulder And Lap Belt Used
	Safety Device Usage	N/A - Sample Size Too Small	N/A - Sample Size Too Small	50% Shoulder And Lap Belt Used 30% None Used 10% Air Bag Deployed/ Shoulder-Lap Belt	83% Shoulder And Lap Belt Used 17% Not Applicable	60% Shoulder And Lap Belt Used 15% Unknown 15% Not Applicable	N/A - Sample Size Too Small	57% Shoulder And Lap Belt Used 21% None Used 14% Air Bag Deployed/ Shoulder-Lap Belt	N/A - Sample Size Too Small	N/A - Sample Size Too Small	17% None Used 9% Unknown
	Hot Spot Crash Summaries				Hot Spot WB MP 340-342						
	Previously Completed Safety-Related Projects										
	District Interviews/Discussions										
	Contributing Factors										

Freight Performance Needs Analysis

Segment	Segment Mileposts (MP)	Segment Length (miles)	Final Need	Roadway Variables								Traffic Variables					Relevant Freight Related Existing Infrastructure
				Functional Classification	Environmental Type (Urban/Rural)	Terrain	# of Lanes/ Direction	Weighted Average Speed Limit	Aux Lanes	Divided/ Non-Divided	% No Passing	Existing LOS	Future 2035 LOS	% Trucks	NB/EB Buffer Index (TPTI-TTTI)	SB/WB Buffer Index (TPTI-TTTI)	
260-1	306-310	4	High	State Highway	Rural	Rolling	4	45	No	Divided	0%	A/B	A/B	14%	0.84	1.18	
260-2	310-323	13	Low	State Highway	Rural	Level	2	65	No	Non-Divided	30%	A/B	A/B	14%	0.22	0.25	
260-3	323-337	14	Low	State Highway	Rural	Level	2	58	No	Non-Divided	30%	A/B	A/B	13%	0.14	0.54	Existing DMS EB MP 335.17; Weigh-In-Motion 334.33
260 60-4	337-345	8	Medium	State Highway	Rural	Rolling	4	38	No	Non-Divided	0%	A/B	C	11%	3.45	3.45	Existing DMS EB MP 339.9; DMS WB MP 339.9
260-5	341-357	16	High	State Highway	Rural	Rolling	4	41	No	Non-Divided	0%	C	C	7%	4.42	3.16	
60-6	345-352	7	High	State Highway	Rural	Level	2	65	No	Non-Divided	50%	A/B	A/B	11%	3.57	3.48	
60-7	352-384	32	High	State Highway	Rural	Level	2	64	No	Non-Divided	30%	A/B	A/B	12%	1.30	0.66	
60-8	384-389	5	Medium	State Highway	Rural	Rolling	2	39	No	Non-Divided	30%	A/B	A/B	10%	3.15	2.14	
60-9	389-402	13	High	State Highway	Rural	Level	2	65	No	Non-Divided	40%	A/B	A/B	18%	0.68	0.54	

Freight Performance Needs Analysis (continued)

Segment	Segment Mileposts (MP)	Segment Length (miles)	Final Need	Closure Extent							Non-Actionable Conditions	Programmed and Planned Projects or Issues from Previous Documents Relevant to Final Need	Contributing Factors
				Total Number of Closures	# Incidents/Accidents	% Incidents/Accidents	# Obstructions/Hazards	% Obstructions/Hazards	# Weather Related	% Weather Related			
260-1	306-310	4	High	14	5	36%	0	0%	9	64%		Programmed: None Planned: None	- High percentage of closures due to weather conditions, primarily in the WB direction. - Four long duration closures.
260-2	310-323	13	Low	10	3	30%	0	0%	7	70%		Programmed: None Planned: None	- High percentage of closures due to weather conditions, all in the WB direction. - Four long duration closures
260-3	323-337	14	Low	18	7	39%	0	0%	11	61%		Programmed: None Planned: Intersection Signal: SR 260 and future relocation of Lone Pine Dam Road (Southern Navajo/Apache County Sub Regional Transportation Plan, MP 335)	- High percentage of closures due to weather conditions, primarily in the WB direction. - Five long duration closures related to weather conditions. - Weigh-in-Motion (WIM) at MP 334.5 - Trucks entering and exiting corridor at MP 335 for access to Refuse Transfer Station may be affecting TPTI measurements and scores.
260 60-4	337-345	8	Medium	20	0	0%	3	15%	17	85%		Programmed: None Planned: Roadway Widening to 4-lane Divided Highway from Heber-Overgaard to Show Low (Payson-Show Low Highway, SR 260, Overgaard to US 60 MP 309.4-340.1, DCR, 2014) Grade Separated TI: US 60 and SR 77 Intersection Signals: US 60 and Future Woolford Extension; US 60 and Ski Hi Road Future Extension (Southern Navajo/Apache County Sub Regional Transportation Plan) Exclusive WB turn lane toward 27th Place (MP 342.5) and exclusive EB right turn lane at 40th Street intersection (Roadway Capacity and Turn Lane Analysis: US 60 between SR 77 and Little Mormon Lake Road Show Low, Arizona, MP 343.3)	- High percentage of closures due to weather conditions. - Five long duration closures from MP 337-341 (both EB and WB) and four long duration closures from MP 340-345 (EB).
260-5	341-357	16	High	19	12	63%	0	0%	7	37%		Programmed: None Planned: None	- High percentage of closures due to incidents/accidents. - Five long duration closures due to weather

												conditions from MP 342-357 (WB) - High number of access points per mile (approx 50). - Approx. 50% of segment has no passing conditions.
60-6	345-352	7	High	14	2	14%	3	21%	9	64%	Programmed: None Planned: EB/WB Passing Lanes-Tier 1 (ADOT Climbing and Passing Lane Prioritization Study, MP 345-348) Proposed WB DMS (Arizona Statewide Dynamic Message Master Plan, MP 345) EB/WB Shoulder Improvement (Statewide Shoulders Study, MP 346-352) Intersection Signal: US 60 and Bourdon Ranch Road (Southern Navajo/Apache County Sub Regional Transportation Plan, MP 347)	- High percentage of closures due to weather conditions, all in EB direction. - Six long duration closures due to weather conditions, all from MP 345-352/353 (EB) - Small data set for travel times.
60-7	352-384	32	High	44	16	36%	1	2%	27	61%	Programmed: None Planned: EB/WB Shoulder Improvement (Statewide Shoulders Study, MP 352-353, MP 358-369) EB Passing Lane-Tier 1 (ADOT Climbing and Passing Lane Prioritization Study, MP 357-260) Stop Controlled Intersection: US 60 and Future Vernon-McNary Road (Southern Navajo/Apache County Sub Regional Transportation Plan, MP 360.6)	- High percentage of closures due to weather conditions, mostly in the EB direction. - 20 long duration closures related to weather (19 of which in the EB direction)
60-8	384-389	5	Medium	19	1	5%	2	11%	16	84%	Programmed: None Planned: Proposed WB DMS (Arizona Statewide Dynamic Message Master Plan, MP 385)	- High percentage of closures due to weather conditions, primarily in the EB direction. - 11 long duration closures
60-9	389-402	13	High	13	0	0%	2	15%	11	85%	Programmed: None Planned: None	- High percentage of closures due to weather conditions, primarily in the EB direction. - Eight long duration closures

Needs Summary Table

Performance Area	260-1	260-2	260-3	260 60-4	260-5	60-6	60-7	60-8	60-9
	MP 306-310	MP 310-323	MP 323-337	MP 337-345	MP 341-357	MP 345-352	MP 352-384	MP 384-389	MP 389-402
Pavement+	High	Low	None*	High	Low	None*	Low	None*	None*
Bridge	None*	None*	None*	None*	None*	None*	None*	None*	None*
Mobility	Low	Low	Low	Medium	Medium	Medium	Low	Low	Low
Safety+	None*	Low	Low	Low	None*	None*	High	None*	None*
Freight+	High	Low	Low	Medium	High	High	High	Medium	High
Average Need	1.54	0.85	0.62	1.69	1.23	1.00	1.08	0.62	0.85

* Identified as an emphasis area for the SR 260 | US 60 corridor
* A segment need rating of 'None' does not indicate a lack of needed improvements; rather, it indicates that the segment performance score exceeds the established performance thresholds and strategic solutions for that segment will not be developed as part of this study

Level of Need	Average Need Range
None*	< 0.1
Low	0.1 - 1.0
Medium	1.0 - 2.0
High	> 2.0